ADMINISTRATION REPORT,
MADRAS.

1901-1902.

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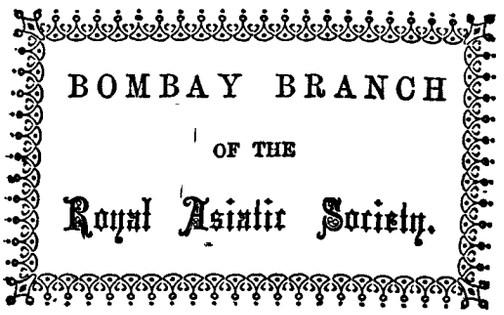

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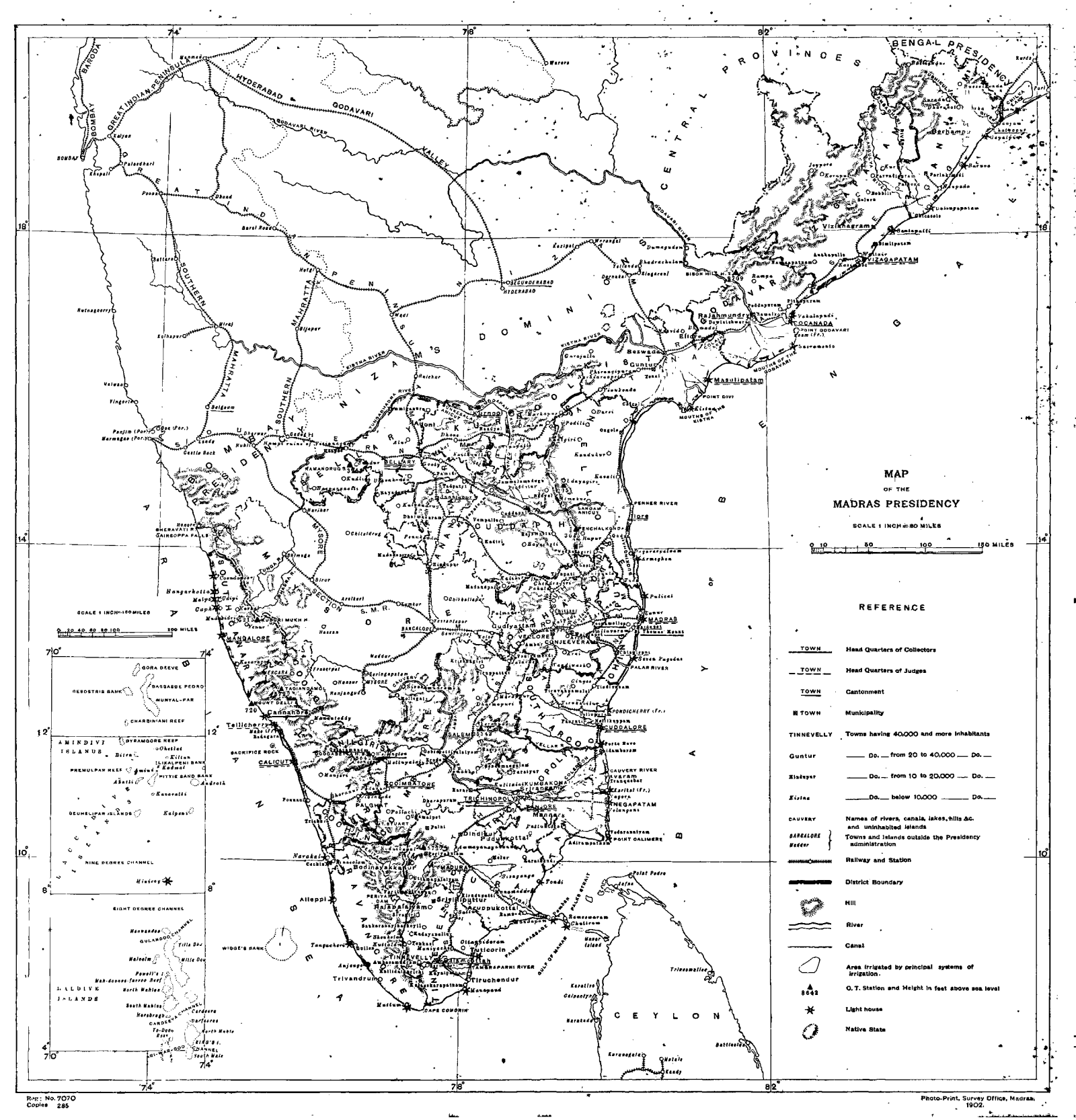
MAP
OF THE
MADRAS PRESIDENCY
SCALE 1 INCH = 20 MILES
0 10 50 100 150 MILES
REFERENCE
TOWN Head Quarters of Collectors
TOWN Head Quarters of Judges
TOWN Cantonment
TOWN Municipality
TINNEVELLY Towns having 40,000 and more inhabitants
Guntur Do. from 20 to 40,000 Do.
Kistnapur Do. from 10 to 20,000 Do.
Kistna Do. below 10,000 Do.
CAUVERY Names of rivers, canals, lakes, hills &c. and uninhabited islands
BANGALORE Towns and Islands outside the Presidency administration
Railway and Station
District Boundary
Hill
River
Canal
Area irrigated by principal systems of irrigation.
8642 O. T. Station and Height in feet above sea level
Light house
Native State
SCALE 1 INCH = 160 MILES
0 20 40 60 80 100 200 MILES
BENGAL PRESIDENCY
CENTRAL PROVINCES
HYDERABAD
GODAVARI
KISTNA
PENNER RIVER
PALAR RIVER
CAUVERY RIVER
VAIGAI RIVER
TAMBRAPARNI RIVER
VIZAGAPATAM
COCANADA
Masulipatam
BELLARY
CUDDAPAH
MADRAS
BANGALORE
MANGALORE
CALICUT
COIMBATORE
SALEM
TRICHINOPOLY
MADURA
TINNEVELLY
Tuticorin
Trivandrum
Tiruchendur
CAPE COMORIN
PONDICHERRY (Fr.)
KARIKAL (Fr.)
MAHE (Fr.)
YANAON (Fr.)
CEYLON
GULF OF MANAAR
PALK STRAIT
LACCADIVE ISLANDS
MINICOY
ALDIVE ISLANDS
AMINDIVI ISLANDS
SOUTHERN MAHRATTA JAGHIRS
SOUTHERN MAHRATTA JAGHIRS
BARODA
BOMBAY
GREAT INDIAN PENINSULA
SOUTHERN MAHRATTA RAILWAY
MADRAS RAILWAY
SOUTH INDIAN RAILWAY
MYSORE RAILWAY
SOUTHERN MAHRATTA COUNTRY
MYSORE
COORG
TRAVANCORE
COCHIN
PUDUKOTTAI
SANDUR
KOLHAPUR
JAMKHANDI
MUDHOL
RAMDURG
KURNOOL
SANDOOR
BANGANAPALLE
KARVETINAGAR
VENKATAGIRI
SURUTTUPALLI
KALAHASTI
KARVETINAGAR
PUTTUR
PALMANER
VELLORE
ARCOT
CONJEEVERAM
CHINGLEPUT
TANJORE
TRICHINOPOLY
SALEM
COIMBATORE
DINDIGUL
MADURA
TINNEVELLY

REPORT

ON THE

ADMINISTRATION

OF THE

MADRAS PRESIDENCY,

DURING THE YEAR

1901-1902.

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PART I.

GENERAL SUMMARY.

PART I.

GENERAL SUMMARY.

Introduction.

1. The Report on the Administration of the Presidency for the year 1901–1902 contains certain revised chapters, the headings of which are, in consonance with the orders of the Government of India, printed in red letters to indicate that they are not reproduced in every annual report. These chapters have not been published in the same volume as the Administration Report hitherto, but have been bound in a separate volume, entitled "Manual of Standing Information for the Madras Presidency." The period with which the other chapters deal is the official year 1901–1902, *i.e.*, 1st April 1901 to 31st March 1902, unless another period is specially mentioned at the head of a chapter or paragraph in Part II. References in the margin of the summary are to the corresponding portions of Part II of this volume.

General.

2. The year 1901–1902 was, on the whole, a prosperous one. Although high prices and scarcity in parts necessitated measures being taken by the Government to relieve some of the poorer classes, the season was generally favourable to agriculture, and a satisfactory increase in the land-revenue and in the receipts from other taxes was accompanied by marked decrease in grave crime, a considerable rise in the value of imports and a fall in the number of emigrants. The year was, however, marked by a low birth-rate and by an increased death-rate, the mortality being abnormally high in the city of Madras. The ravages of cholera were more severe than in the previous year, and plague was established on the frontiers of the Presidency. Though the year was not remarkable for great legislative activity, the preparations for the Irrigation Commission, the Educational Conference at Simla and the submission to the Government of India of proposals for the reform of the police foreshadowed administrative improvements in the near future.

Personnel of the Administration.

3. The office of Governor of the Presidency continued to be held during the year by His Excellency the Right Hon'ble Arthur Oliver Villiers, *Baron* Ampthill, G.C.I.E. The Hon'ble Mr. A. T. Arundel, C.S.I., was a Member of Council, until his appointment to the Council of the Viceroy and Governor General of India on the 9th May 1901. The Hon'ble Mr. H. M. Winterbotham, C.S.I., continued in office throughout the year. The Hon'ble Mr. J. Thomson, C.S.I., was appointed a Member of the Council, when the Hon'ble Mr. Arundel vacated his appointment.

His Excellency the Governor's tours.

4. On his third tour, which commenced on the 9th of October 1901, His Excellency the Governor visited the districts of Malabar and South Canara. He arrived at Calicut on the 14th October and there received and replied to seven addresses from various local bodies, institutions and communities, the addresses from the Mappilla community and the people of Malabar on matters relating to the recent land-revenue settlement being the most important. He also gave an audience to a deputation of the Laccadive islanders, who chanced to be then at Calicut on business, and took the opportunity of laying the foundation stone of Rajah Sir Savalai

Ramasawmy Mudaliar's Women and Children and Maternity Hospital. From Calicut His Excellency went to Cannanore by land *viâ* Mahé and Tellicherry, and thence to Mangalore by sea by the R.I.M.S. *Canning*, which had been placed at his disposal for the purpose by the Government of India. Here six addresses were received and replied to, the principal ones being on the subject of the proposed settlement. From Mangalore His Excellency drove to Múdabidri, where he visited the ancient Jaina temples. Returning to Calicut by sea, His Excellency arrived at Madras on the 30th October 1901. Early in the following year, His Excellency the Governor paid a visit to His Excellency the Viceroy at Calcutta. He left Madras on the 31st of December 1901 and returned to Madras on the 11th January 1902. During his next tour, which lasted from 23rd February to 9th March 1902, His Excellency inspected the Boer camp at Trichinopoly and visited Tanjore, Negapatam, Tranquebar, Kumbakónam, the Grand Anicut, Dindigul and Madura. At each of these places, he received and replied to addresses from the respective municipal councils, district boards, etc. At Madura he received deputations from the Sowrashtra and the Muhammadan communities. At Vallam, the Grand Anicut and Pothumbu near Madura, he inspected typical holdings and held informal audiences with the ryots. On the way back to Madras, His Excellency inspected the Peranai dam near Ammayanáyakkanúr.

I.—POLITICAL.

Travancore. *Part II, pages 102 to 107.* Administration of the land.

5. The collection of land-revenue in Travancore State was more unsatisfactory than in the previous year and a large balance of arrears was left outstanding in the accounts. Some progress was made in the survey and settlement of the State.

Protection.

6. A Municipal Act and a Post Office Act were passed during the year. The strength of the police-force was slightly increased on account of the construction of the Tinnevelly-Quilon railway. The percentage of cases reported by the police which ended in convictions was higher than in the previous year. The number of registered known depredators rose. Two new additional sessions judges were appointed and a second-class magistrate's court was established in connection with the Tinnevelly-Quilon railway. There was a fall in the number of offences and cases tried by the courts, and a marked decrease in the number of persons committed to Sessions Courts. The mortality in the jail at Trivandrum continued to be high; a special committee was appointed to investigate its causes. An additional munsif's court, established temporarily in the previous year, was abolished. There were more arrears in civil courts at the end of the year than at its beginning, the work done being generally less than in M.E. 1075, but the number of suits which had been pending for more than one year in munsifs' courts decreased. There was a fair rise in the number of instruments presented for registration but their aggregate value fell. The number and aggregate tonnage of vessels which called at the ports were more than in the previous year.

Production and distribution.

7. The season was generally more favourable for agriculture than in M.E. 1075. The system of exclusive departmental working of the forests has been introduced in place of the "permit" system. There was an increase in the receipts from forests and a fall in the expenditure on them. The aggregate value of the imports rose appreciably and that of exports rose slightly, but there was a heavy fall in the exports of the several products of the cocoanut on account of the poor crop. In the Public Works department an audit office was created in the Chief Engineer's office and a departmental code of rules was sanctioned; there was a considerable

increase in expenditure on public works. Lands required for fifty-six miles of the Tinnevelly-Quilon railway were acquired and the acquisition of land for the Cochin railway was completed. Fourteen post-offices and five letter-boxes were opened and two boxes were closed during the year. The rates of postage were revised and the postage charged on ordinary letters and for registration is now generally lower than in British India.

Revenue and finance.

8. The revenue and expenditure of the State were the highest on record. The receipts, exclusive of debt-heads, were Rs. 95,90,663 and, inclusive of debt-heads, Rs. 99,17,170. The expenditure, exclusive of debt-heads, amounted to Rs. 95,84,590 and, inclusive of debt-heads, to Rs. 96,55,757. The closing balance was Rs. 1,02,07,332—more than a year's revenue from all sources. The net receipts from salt, customs, and stamps all increased and the net receipts from abkári, opium and bhang fell slightly.

Vital statistics, etc.

9. There were 53,481 births and 46,548 deaths registered, the rates per mille per annum being 18·1 and 15·8 respectively; the registration appears to be incomplete. The number of in-patients treated in the State hospitals and the mortality among them were higher than in M.E. 1075; a decline in the number of out-patients is ascribed to favourable climatic influences. Although the number of vaccinations and percentage of successful operations rose, there were five times as many deaths from small-pox as in the previous year.

Education.

10. The numbers of schools and of pupils were higher than in M.E. 1075, especially in primary institutions. Two training schools at Trivandrum were amalgamated into one. A professor of history was appointed in the college for boys at Trivandrum and an assistant professor was appointed in the Law College. Rules for the guidance of the text-book committee were published.

Cochin.
Part II, pages 107 to 110.
Administration of the land.

11. The administration of the State of Cochin progressed steadily during M.E. 1076. The collection of the current demand of land-revenue was carried on satisfactorily, but the arrears extend over seventy-nine years. The land-revenue is apparently paid without difficulty. The survey of the State was continued.

Protection.

12. Eight regulations were passed by the legislative council during the year. The number of departmental punishments in the police-force rose considerably. More than one-third of the cases of grave crime were referred by the police as false. Less than one-fifth of the persons accused in cases decided by magistrates during the year were convicted. The daily average number of convicts in the central jail rose appreciably but there was a slight decline in the average cost of each prisoner. A regulation relating to the management of prisons was passed during the year. The number of civil suits decided by munsifs was less than the number filed during the year and less than the number decided in M.E. 1075 and there was an increase in the average pendency of cases in munsifs' courts. Two regulations dealing with civil courts were passed; the Rajah's Court of Appeal was abolished, the designations of the "Appeal Court" and "Zillah Courts" were changed to the "Chief Court" and "District Courts," and the jurisdiction of munsifs was considerably increased. There was an increase in the number and aggregate value of documents registered during the year.

Production and distribution.

13. The season was not unfavourable to agriculture. There was a marked decrease in thefts in forests. The demarcation of the forests was begun and some working schemes were introduced. The alignments of a tramway and two timber-slides were surveyed. There was a considerable increase in the revenue from

forests. The net expenditure on the Cochin State railway was Rs. 26,60,562. Four new post-offices were opened and the staff of the department was strengthened.

Revenue and finance.

14. The total receipts and expenditure under service heads amounted to Rs. 27,61,304 and Rs. 25,14,026 respectively. To raise money for expenditure on the Cochin State railway, Government of India promissory notes for Rs. 16,66,000 were sold for Rs. 15,88,410 and a railway debenture-loan of Rs. 10,00,000 was raised. At the close of the year the State held Government of India promissory notes for Rs. 8,75,800 and had in addition a cash balance of Rs. 3,08,816.

Vital statistics, etc.

15. There were 5,267 births (6·5 per mille) and 6,466 deaths (7·9 per mille) registered. The registration of births and deaths is evidently most defective. There was a rise in the expenditure on the Medical department and nearly three times as much was spent on sanitation and conservancy as in the previous year. The number of vaccine operations and the percentage of success were higher than in M.E. 1075.

Education.

16. The total number of schools and pupils increased, the rise being particularly marked in special institutions.

Pudukkóttai.
Part II, pages 111, 112.
Administration of the land.

17. The collection of current demand of land-revenue in Pudukkóttai State was good, if allowance is made for amounts, in connection with which enquiries were pending at the close of the year. Arrears of land-revenue relating to 26 years remained uncollected at the close of the year. Cadastral and theodolite surveys were carried on in two taluks; the inam settlement department continued its work.

Protection.

Three regulations were passed during the year. The number of cases reported to the police rose, but the percentage of detections and convictions fell. One magistrate's court was abolished. The number of cases before magistrates was more than in fasli 1310. One subsidiary jail was abolished. An additional small cause court was established. The amount of work done in all civil courts was more than in the previous year but the arrears in the Chief Court were still heavy. A decline in the number of documents registered is attributed to the favourable character of the

Production and distribution.

season. The average prices of the principal food-grains were easier than in the previous year, but pasture and fodder were insufficient. A rise in the revenue derived from forests was accompanied by a decline in the expenditure on them.

Revenue and finance.

There was a marked increase in the amount spent on public works. The receipts and expenditure during the year were Rs. 11,97,413 and Rs. 10,31,719. The closing balance was Rs. 10,66,221. A lakh of rupees was invested in Government promissory notes and the value of Government paper owned by the State rose to seven

Vital statistics, etc.

lakhs of rupees. The numbers of births and deaths registered were only 4,396 (11·55 per mille) and 4,131 (10·85 per mille), showing that the registration is very incomplete. Although the public health was fair, the number of patients treated in the hospital and dispensaries was higher than in fasli 1310. There was

Education.

a marked increase in the number of vaccinations. The numbers of schools and of pupils declined during the year.

Banganapalle.
Part II, pages 112, 113.

18. The collection of land-revenue in Banganapalle State was unsatisfactory. The total uncollected balance at the close of the year was nearly as much as the current demand. The theodolite survey of the State was completed. The proportion of cases detected by the police was much higher than in the previous year. The ameen's office was abolished on the death of the incumbent. The disposal of work by the civil and criminal courts was satisfactory. There was a marked rise in the number and value of documents registered. The rainfall was generally insufficient and the harvest was poor. The receipts and expenditure during the

year were Rs. 1,15,835 and Rs. 1,15,688 respectively; the closing balance was Rs. 64,424, including Rs. 56,000 lent by Government for expenditure on survey. There were 528 births (18 per mille) and 391 deaths (12·1 per mille) registered; the figures appear to be unreliable. There was an appreciable increase in the number of vaccinations, but the percentage of successful operations was low. The number of pupils in the Anglo-vernacular school was higher than in the previous year.

Sandur. *Part II, pages 113, 114.*

19. Efforts were made in some directions to improve the administration of Sandur State. The survey was continued during the year. Half the cases reported to the police ended in the conviction of the accused. There was a considerable increase in the work done in the Dewán's Court; no criminal cases and only one civil suit were pending in it at the close of the year. The number of documents registered increased nearly fourfold. The rainfall was sufficient, but the supply of water in wells was insufficient. Much damage was done to the forests by fires. The receipts and expenditure were Rs. 55,010 and Rs. 46,393 and the closing balance was Rs. 28,524. The numbers of births and deaths registered were 362 (32·3 per mille) and 294 (26·2 per mille). The public health was good on the whole, though there was a considerable increase in the number of patients treated at the dispensary. There was a slight fall in the number of vaccinations, which however was 50 per cent. more than the number of births registered during the year. The number of pupils in the lower secondary school and the average daily attendance rose and the results of the primary examination were satisfactory.

Condition of the people. *Part II, pages 114, 115.*

20. A deficient south-west monsoon in 1901–1902, following a poor north-east monsoon in the preceding year, caused distress in portions of the districts of Cuddapah, Anantapur, Chingleput and North Arcot, and relief works were opened on a small scale. The prices of the principal food-grains fell generally in the course of the year, but they remained considerably above the average. The average monthly rates of wages were not noticeably different from those prevailing in the previous year.

II.—ADMINISTRATION OF THE LAND.

Realization of revenue. *Part II, pages 116 to 118.*

21. There was a slight increase in the current demand of peshkash payable on permanently-settled estates, but the uncollected balance at the close of the year was more than a lakh of rupees in excess of the balance at the beginning of the year. The amount of quit-rents payable on account of villages held on shrotriyam and other favourable tenures fell slightly, as the quit-rents on certain minor inams erroneously included under shrotriyam-jodi in previous years were transferred to "ryotwar and miscellaneous." The uncollected balance at the close of the fasli was about two-thirds of the balance at its beginning. There was an increase of $25\frac{3}{4}$ lakhs of rupees in the current demand of land-revenue under ryotwar and miscellaneous. The increase was mainly due to the favourable character of the season in most districts following a generally unfavourable season in fasli 1309. Extensions of irrigation in the Kistna delta-system and under the Periyár dam in Madura district and increase in the area of irrigated second-crop on account of the plentiful supply in sources of irrigation also contributed to the increase. The seasonal remissions were less than half those granted in fasli 1309 but were nearly three times as much as in fasli 1308. The total current demand under land-revenue and cesses amounted to Rs. 6,52,99,814—Rs. 29,39,944 more than in the previous year—of which Rs. 6,34,15,812 or Rs. 50,75,999 more than in fasli 1309,

Peshkash.

Shrotriyam-jodi.

Ryotwar and miscellaneous.

Total land-revenue.

were collected. The arrears outstanding at the beginning of the year were Rs. 42,92,699, but the balance at its close was Rs. 22,07,323. These satisfactory results were due chiefly to the general good season which enabled the ryots to meet their obligations. The cost of district-administration declined slightly.

Survey. *Part II, pages 118 to 121.*

22. The main part of the survey work of the year consisted in the original cadastral survey of the Vizianagram estate and in the cadastral resurvey of ryotwari lands in the districts of Kistna, Kurnool and Nellore. The outturn fell short of the forecast in all these districts except Kistna. In Vizianagram the requisite number of field surveyors could not be obtained. The same cause operated to some extent in Kurnool and Nellore. The average cost of the resurvey of a square mile in each of the three districts, was Rs. 147 in Nellore, Rs. 99 in Kurnool, and Rs. 77 in Kistna. The special cadastral survey of municipalities was stopped owing to more urgent demands on the department. In municipalities 154 square miles have been surveyed and mapped up to date at an average cost of Rs. 2,822 a square mile. The survey of the Banganapalle State was begun during the year. The work done in connection with the maintenance of existing boundary-marks and survey-records in ryotwari areas was inadequate, and the Government have under consideration a scheme for ensuring better work in future. Attention was paid to the training of officers in the Revenue department in surveying, but no regular survey-schools were held for karnams during the year. More than half the Presidency has now been surveyed cadastrally.

Settlement. *Part II, pages 121 to 123.*

23. Four settlement parties were at work during the year. The most important work was the initial settlement of Malabar district. The revised rates of assessment were introduced in two taluks and in a portion of a third taluk, in which the issue of rough pattas and the hearing of objection-petitions were completed. Objection-petitions in connection with the resettlement of Gódávari district and of the Masulipatam portion of Kistna district were heard and the reclassification of soils in the Guntur portion of Kistna district was begun. Up to the 31st March 1902 the total cost of the Settlement department was Rs. 1,31,97,158 and the increase in the annual demand of land-revenue which occurred in consequence of the department's work was Rs. 77,53,925 or 21 per cent. of the land-revenue before the department was established. The initial settlement of the Presidency is still incomplete. No special establishment was entertained during the year in connection with the enfranchisement of inams.

Inams.

Land records. *Part II, pages 123, 124.*

24. The village and taluk accounts were kept fairly well on the whole, but there are still defects in the permanent B registers relating to inams in some districts.

Waste lands. *Part II, pages 124, 125.*

25. In ryotwari lands the extent of "dry" holdings increased by 0·3 per cent. and the area of "wet" holdings by 1·2 per cent. The area not available for cultivation, and the areas of unoccupied arable land and of occupied land which were left waste all diminished. The diminution in the area of waste occupied lands was 17 per cent., the fall being particularly marked in Kistna district. The satisfactory extension of holdings and cultivation was due to the generally favourable season. In comparison with the figures for fasli 1285—the year before the great famine of 1876–78—the extension of cultivation was 1·94 million acres, excluding 1·23 million acres due to the substitution of correct areas for the areas according to old surveys. This extension was shared by all districts except Kurnool, where the decrease in holdings was attributed mainly to the occurrence of unfavourable seasons at short intervals.

Wards' estates. *Part II, pages 125 to 130.*

26. Thirty-nine estates were under the management of the Court of Wards at the beginning of fasli 1310 (1900–1901). Three estates were newly taken up during the year, while three others were surrendered to their proprietors on the cessation of minority. The financial position of all the three estates surrendered, Tangallamudi in Gódávari, Edamanal in Tanjore and Mambarai in Madura, was improved while the estates were under the management of the Court of Wards, large debts due by the estates having been paid off. Of the 39 incapacitated proprietors who remained under the Court's care, one was an imbecile, 34 were minors (two being females), two were incapacitated by sex alone while the remaining two (Kálahasti and Karvetnagar) were on their own application made wards of the Court under Madras Act IV of 1899 owing to the embarrassed condition of their estates. The total area of holdings in estates under the Court's management was 736,245 acres, of which 78·9 per cent. were cultivated. There was a considerable advance in the gross current demand of rent, but a much larger amount was remitted than in fasli 1309. The success in collecting the arrears and the current rent was poorer than in the previous year and less than three-fifths of the total rent due, including arrears, was collected and the balance due at the close of the year exceeded twenty lakhs of rupees; this was largely due to the confused state of the accounts in the encumbered estate of Kálahasti, when it was taken under the management of the Court. There was a very large increase in the extent included in holdings, due mainly to the inaccuracy of the figures in Kálahasti and to the recovery of villages in Karvetnagar from the possession of usufructuary mortgagees. The statistics concerning holdings and cultivation are still in many cases too incomplete and untrustworthy to be of much value. Progress has been made in training karnams and the survey of the more important estates either has been undertaken or is in contemplation. The net receipts of the estates increased considerably and the net charges also rose slightly; the total balance at the credit of estates was increased by nearly Rs. 7¾ lakhs. Only 45·8 per cent. of the allotments for public works was spent. This unsatisfactory result is ascribed chiefly to inefficient and inadequate establishments. The collection of debts due to the estates received careful attention. Of debts amounting to Rs. 10·89 lakhs (excluding the encumbered estates of Kálahasti and Karvetnagar) Rs. 1·59 lakhs were paid. In the case of Kálahasti and Karvetnagar the year's work consisted largely in determining the liabilities incurred before the intervention of the Court of Wards. The education of minor wards and their dependent relatives received due attention during the year.

Revenue- and rent-paying classes. *Part II, page 130.*

27. The total number of ryotwari pattas rose by 4 per cent. during the year. Nine-tenths of the pattas were for amounts less than Rs. 30 each, and more than three-quarters of them were for amounts not exceeding Rs. 10 each; twelve per cent. of the pattas were for amounts less than one rupee each; but one ryot may hold more than one patta.

III.—PROTECTION.

Course of legislation. *Part II, page 133.*

28. The Legislative Council held six meetings. The Madras Court of Wards Act, 1902, was the only Act passed during the year.

Police. *Part II, pages 133 to 136.*

29. The sanctioned strength of the ordinary police-force was increased owing to the employment of special police in connection with plague in Bellary and Salem districts. Though the percentage of literate constables remained the same as in 1900, there was a satisfactory advance in the number of Inspectors who were

graduates of the University. The conduct of the force appears to have shown no improvement, as, although the number of fines and the average fine diminished, the number of black marks awarded and the number of suspensions increased and there was a marked rise in the number of dismissals of officers and men. A greater number of rewards was granted in 1901 than in the previous year. The Police Training school at Vellore was continued. The additional (punitive) police-forces employed in Tinnevelly and Madura were increased on account of the prevalence of crime. A fall in the prices of the principal food-grains had, as usual, the effect of reducing the total amount of cognizable crime during the year. Grave crime also decreased, but the number of dacoities and robberies was higher than in any recent year except 1900. There was a marked decline in detection, especially in the case of grave crimes against property, and the percentage of stolen property which was recovered was poor. The paucity of superior officers and the consequent relaxation of supervision over the work of the subordinate police were in part responsible for these poor results. Owing to the enquiries recently made in connection with the steps to be taken to secure agreement between the statistics of crime as shown in the Police and the Criminal Justice Administration reports, the number of offences reported under special and local laws and under public and local nuisances showed an appreciable increase, as the returns were more accurate than they were in previous years. There was a slight improvement in the percentage of cases personally investigated by District and Assistant Superintendents. More than a quarter of the cases under the Indian Penal Code, excluding nuisances, which were reported by the police and on which the magistrates passed orders during the year, were, on the recommendation of the police, treated as false, and in 42 per cent. of these cases, the charges were considered to be maliciously or wilfully false ; but the steps taken to stop the institution of false complaints and false charges were inappreciable. Increased attention was paid generally to the working of the preventive sections of the Code of Criminal Procedure. The finger-prints of a large number of convicts were registered by the Criminal Identification Bureau and over five hundred persons were found by the Bureau to be old offenders. Considering the difficulties under which the department worked during the year owing to the inadequate strength of superior officers, the results may be regarded as satisfactory.

Criminal justice.
Part II, pages 136 to 138.

30. The number of offences reported to criminal courts was more than in 1900 but the proportion of complaints rejected under section 203 of the Code of Criminal Procedure in 1901 was almost the same as in the previous year. More prosecutions were instituted under the Towns' Nuisances Act, the City Police Act and the Forest Act than in 1900, but the number of prosecutions under the District Municipalities Act and the Salt Act declined. There was a marked fall in the number of village magistrates who tried cases and in the number of cases tried by them ; this is ascribed to the favourable character of the season. Although more cases were instituted in magistrates' courts in the mufassal, the arrears at the end of the year were less than at its beginning. Slightly more than half the persons tried by these courts were convicted. Fewer sentences of imprisonment were inflicted than in 1900, but the number and severity of fines increased ; there was a noticeable decrease in the number of sentences of whipping. The average pendency of cases was less than in 1900. There was a fall in the number of cases committed to the sessions courts in the mufassal and the average duration of cases and the number of cases pending at the close of the year were less than in the previous year. The jury system is reported to have worked well. The increase in the

prosecutions under the City Police Act caused a rise in the number of cases instituted in the courts of Presidency magistrates. The percentage of convictions (91) was the same as in the previous year. There was a slight increase in the number of cases committed to the High Court as a sessions court. The number of appeals filed increased in the courts of magistrates and in sessions courts but decreased in the High Court.

Prisons. *Part II, pages 138 to 140.*

31. There was a slight decrease in the accommodation in district jails, and the daily average number of prisoners exceeded the permanent accommodation in three central jails and in three district jails; one of these central jails and one of the district jails will be enlarged shortly. All Burman convicts confined in jails in this Presidency were removed to Burma. The number of prisoners received during the year was considerably less than in 1900 but was still far more than the number admitted during any other year in the past decade. Although the number of prisoners was less at the close of the year than at its beginning, the daily average number of prisoners was the highest during the past decade, the rise being apparently due to the number of prisoners in jail at the beginning of the year being larger than at the beginning of the previous year and to the increase in the number of convicts sentenced to long terms of imprisonment who remained in jail during the year. There was a slight increase in the number of juveniles confined in jails; the large number of juveniles imprisoned in the Penitentiary was particularly noticeable. Apart from the cases, however, in which juveniles have been deliberately committed to jail, it appears that a number of juvenile offenders intended for confinement in the Reformatory school had to be admitted to the central jail at Rajahmundry pending arrangements for their removal to the Reformatory. The mortality among prisoners was less than in 1900, but was not so low as in 1899; a greater percentage of convicts were admitted into hospitals than in 1900. There was a large increase in the number of cases of malarial fever in the Rajahmundry jail and the proportion of admissions to hospital in this jail was higher than in any other central jail, not excepting Trichinopoly, where, on account of the large accumulation of old and decrepit prisoners, the conditions were abnormal and a high sick-rate was to be expected. There was an increase in the cost of maintenance of prisoners, which was due to unavoidable causes. The net profits derived from manufactures were less than in either of the two preceding years, though the total amount earned was higher than in any previous year. Taking into account, however, the prevalence of cholera in several jails during the year and the partial cessation of work in the weaving department of the jail at Coimbatore owing to a breakdown in the machinery, the results attained were not unsatisfactory. The class of assistant jailors was reorganized during the year. An arrangement was made between the Police and Jail departments regarding the conveyance of prisoners by rail. The scheme for the concentration of prisoners in subsidiary jails was extended to four districts. The work-house was located in the Penitentiary, and the number of vagrants admitted was considerably less than in 1900. On the whole, the results of the administration of the jails were satisfactory.

Civil justice. *Part II, pages 141 to 145.*

32. The number of civil courts, excepting village courts, was almost the same as in 1900. There was a diminution in the number of suits instituted during the year which is ascribed to the succession of rather unfavourable seasons except in South Arcot district, where, owing to an exceptionally good crop of ground-nut, less recourse was had to law. There was a considerable increase in the number of appeals filed. The amount involved in original litigation rose slightly, while there

was a marked increase in the aggregate value of property involved in appellate litigation. Though the number of village courts, before which cases were tried, rose considerably, fewer cases were instituted before them than in 1900, and the arrears in those courts declined slightly but not in proportion to the decrease in the number of cases filed. There was a marked fall in the number of suits filed in revenue courts, but they disposed of 66 per cent. more cases than in 1900, and consequently there was a considerable decrease in the number of cases pending at the close of the year. In district munsifs' courts the numbers of ordinary suits and of small causes filed, decided, and pending at the close of the year were all less than in 1900, but they decided more contested ordinary suits than in the previous year. There was an appreciable reduction in the number of ordinary suits pending for more than one year in these courts, but there were nearly three times as many small cause suits pending for more than three months at the close of the year as at its beginning. The number of ordinary suits instituted in subordinate judges' courts was nearly the same as in 1900, but the number of small causes instituted decreased. The disposal of ordinary suits and of small causes in these courts was, however, less than in the previous year and the arrears of both increased; the number of small causes pending for more than three months at the end of 1901 was about three times as great as at its beginning. There was an appreciable reduction in the number of appeals pending in subordinate judges' courts. Though the number of ordinary suits instituted in district courts rose appreciably, there was a still greater increase in the number decided by them and the arrears fell slightly; on the other hand, although the number of small causes instituted in these courts decreased by nearly one-third, the number of such cases pending at the close of the year was more than at its beginning on account of the decline in their disposal by the courts. There was a marked increase in the number of appeals pending in district courts, and the average pendency of both contested and uncontested appeals exceeded six months in five district courts and the average pendency of contested appeals exceeded six months in three other district courts. A decrease in the number of cases instituted in the Presidency Court of Small Causes was accompanied by a decreased outturn of work and by a reduction of arrears. In the City Civil Court the numbers of cases instituted and decided also declined and the arrears remained almost stationary. The numbers of original cases for disposal and disposed of by the High Court were less than in 1900 and the arrears increased slightly. There were more first and second appeals for disposal by the High Court than in 1900; more first appeals and fewer second appeals were decided during 1901 than in the previous year and the arrears of both classes of appeals increased; the average duration of first appeals in the High Court was thirteen and-a-half months, and of second appeals sixteen months. There was a considerable decline in the number of revision cases decided by the High Court and a corresponding increase in the number pending at the close of the year. Of 20 applications for leave to appeal to the Privy Council, seven were disposed of. The Privy Council decided five out of twelve cases for disposal. In 36 cases the records were under preparation in the High Court.

Registration.
Part II, pages 145 to 147.

33. Four new sub-registrars' offices were opened during the year. The aggregate number of documents registered was the highest on record; the number increased in all districts except Madras-Chingleput, North Arcot, Tinnevelly, Madura and South Canara, various reasons being assigned for the increase in the several districts. Ninety-six per cent. of the documents registered related to immoveable property; their aggregate value was higher but their average value was lower than in any year in the preceding quinquennium. The aggregate value

of deeds relating to moveable property was less than in 1900–1901, although their number was greater. No documents remained uncopied in registry-offices at the close of the year; over 70 per cent. of the documents tendered for registration were copied on the day of presentation and the work of indexing was, with few exceptions, kept up to date. The number of documents lying unclaimed in registry-offices at the end of the year was large. There was a considerable increase in the number of impounded documents, upon which orders had not been passed at the end of the year. A small increase in the average fee levied on a document and an appreciable rise in the total amount of fees levied were accompanied by a very slight advance in the total income and an increase in the total expenditure, so that although the net revenue derived from the department was equal to nearly half the total expenditure on it, it was less than in the previous year. The increase in expenditure was due to the general expansion of the operations of the department. As many officers of the Registration department were appointed notaries public as in the previous year, and, although the number of those who did any work as such was less than in 1900–1901, there was a considerable increase in the number of documents dealt with, especially at Tellicherry. There was a rise in the number of companies registered under the Indian Companies Act (VI of 1882) and working at the end of the year, but their average nominal capital and paid-up capital were less than in 1900–1901. It is expected that the appointment of District Registrars as Assistant Registrars of joint-stock companies, which was sanctioned during the year, will be the means of securing improved supervision over the administration of joint-stock companies in the mufassal.

Local Boards administration.
Part II, pages 147 to 149.

34. The number of district boards remained the same as in 1900–1901, but their aggregate maximum strength was reduced slightly; the proportions of *ex-officio*, nominated and elected members remained almost stationary. There was a marked rise in the number of meetings held by district boards. One additional taluk board was created, during the year, and the aggregate strength of taluk boards increased by 12; the proportion of officials to non-officials among the members was slightly higher than in 1900–1901; they held more meetings than in the previous year. There were two more union panchayats than in the previous year, and the proportion of official members to non-officials rose slightly; the number of meetings held by panchayats rose appreciably. The aggregate receipts of local boards were Rs. 2·35 lakhs more than in 1900–1901, the revenue from rates and taxes increasing by nearly two lakhs of rupees. The expenditure was almost a crore of rupees and exceeded the receipts, excluding debt-heads, by Rs. $9\frac{3}{4}$ lakhs, the balance being reduced to less than Rs. 24 lakhs. More than one-third of the outlay was on public works and one-quarter of the whole expenditure was spent on the repair of roads. The number of hospitals was slightly less than in 1900–1901 and the number of dispensaries increased. More patients attended the medical institutions than in the previous year. About six per cent. of the total expenditure was spent on medical institutions and midwives. The expenditure on sanitation was about a twentieth of the total charges. Funds were also expended on education. The net profit derived by the Tanjore district board from its railway was 5·3 per cent. of the total capital outlay on the line.

Municipal administration.
Part II, pages 149 to 153.
Mufassal.

35. The number of municipalities was the same as in the previous year. There was a rise in the proportion of native members to European and Eurasian members on the councils. The aggregate current receipts of municipalities were nearly 8 per cent. more than in 1900–1901, and the average incidence of municipal

taxation per head of population rose by five pies. Six municipalities borrowed money from Government for expenditure on water-works or in connection with plague. The total charges were about 10 per cent. in excess of the receipts, and the balance was reduced from over Rs. 9½ lakhs to less than Rs. 6¼ lakhs. Nearly one-third of the total expenditure was spent on public works, but the outlay on the construction and repair of roads was less than three-quarters of the revenue from tolls. The public debt due by the municipalities at the close of the year exceeded Rs. 18½ lakhs—about half the annual revenue and about three times the balance on 31st March 1902—and the sinking fund for the repayment of debts was slightly more than three-quarters of a lakh of rupees.

City of Madras.

36. The receipts and charges of the Municipal Commission of the city of Madras were much less than in 1901–1902. The fall in the receipts was due to the fact that the Commission borrowed over ten lakhs of rupees in the previous year. The revenue from municipal rates and taxes increased, and the average incidence of taxation per head of population calculated on the population according to the census of 1901 rose by seven pies to Rs. 2–1–1. The grants from Government were increased by a special grant of one and-a-half lakhs of rupees for expenditure in connection with measures for the prevention of plague. The execution of the new scheme of drainage was continued but the expenditure on it—two and three-quarter lakhs of rupees—was considerably less than in the previous year. The total amount spent on public works was nearly nine lakhs of rupees and represented 46 per cent. of the gross expenditure. Over Rs. 3⅓ lakhs were spent on sanitation. A remarkable feature of the year was the high death-rate of 55 per mille per annum.

Military (Volunteering). *Part II, page 153.*

37. Although four additional companies of volunteers were formed during the year, the numbers of extra-efficients and efficients were less than in 1900–1901.

Marine. *Part II, pages 153 to 155.*

38. The provisions of the Indian Ports Act (X of 1889) were extended to two ports and the limits of two ports were altered. Rules relating to explosives, petroleum, carbide of calcium and salvage fees were brought into force or revised. Dredgers were at work at Cocanada, Negapatam and Tuticorin. There was a rise in the value of imports at Madras and a considerable fall in the exports from that port, the net result being an increase in the duty levied; the values of imports and exports at other ports rose considerably and the duty advanced by 74 per cent.; Tuticorin and Cochin were the most important of these ports. New lights with French burners were exhibited in five lighthouses and two others were prepared to receive new lights. New towers for lighthouses were erected at Cochin, Pulicat and Masulipatam.

Miscellaneous. *Part II, page 155.*

Sulphur.

39. There was an increase in the number of licenses for the possession of sulphur, but the quantity of sulphur covered by them was less than the quantity covered by licenses in 1900. It was, however, remarkable that the quantity was far in excess of the quantity actually imported and of the quantity actually sold.

Arms and explosives.

40. The total number of licenses issued under the Arms and Explosives Acts remained almost stationary, but a considerable increase was noticeable in the number of licenses for the possession and transport of gunpowder and fuses for blasting purposes; the increase occurred almost wholly in Madura and Coimbatore and is attributed to the increased use of explosives in sinking and deepening wells owing to the drought. There was a further decrease in the number of prosecutions instituted for breaches of the provisions of the Arms and Explosives Acts and the rules made thereunder.

IV.—PRODUCTION AND DISTRIBUTION.

Agriculture. *Part II, pages 156, 157.*

41. The work of the provincial agricultural department consisted mainly in the preliminary cultivation of experimental plots at two farms opened during the year, one at Bellary and the other at Koilpatti in Tinnevelly district. An experimental plantation of varieties of fibre plants was made at Hindupur in Anantapur district; about a third of the plants died but the others did fairly well. The chief economic investigations of the Government Botanist were in connection with diseases affecting the sugarcane and the date palm; the systematic or classificatory botanical survey of the Presidency was at the same time continued; the total number of plants collected was larger than in any previous year. The work of collecting specimens for the Imperial Institute continued. Little progress was made in veterinary science as no Superintendent, Civil Veterinary department, was on duty for six months. The Glanders and Farcy Act had, in consequence, to be withdrawn in Madura district. Two agricultural bulletins were published. Certain recommendations in regard to primary education in agriculture were under the consideration of Government.

Weather and crops. *Part II, pages 158, 159.*

42. The rainfall was deficient in the Deccan, North Arcot, Nellore, and the Circars except Gódávari; in other districts it exceeded the average. The supplies in rivers were generally adequate. In Tanjore district, the Cauvery breached its banks near Kumbakonam, but little damage was caused. The area of cultivated wet land extended by four per cent. and that of cultivated dry land by nearly five per cent. The increase in wet land occurred mainly in Kistna, while that in dry land occurred principally in Kurnool, Bellary, Anantapur, South Arcot, Salem and Coimbatore. The total area of cultivated wet land was 5·03 million acres and of cultivated dry land 18·92 million acres. The outturn of crops was fair on the whole; the crops were poorest in Chingleput, Tinnevelly, Madura and Vizagapatam and best in Bellary, Tanjore and Trichinopoly. High prices caused distress amongst the very poor in parts of Cuddapah, North Arcot, Chingleput and Anantapur districts, and test-works were opened in Cuddapah and North Arcot, and relief was given at kitchens in all four districts. Weavers in Cuddapah were relieved by being given employment at their trade. The numbers on relief at any one time were never great, the highest figures reached being 5,355 on works, 2,798 in kitchens and 3,099 weavers.

Horticulture. *Part II, pages 159, 160.*

43. The Government Gardens at Ootacamund, Sim's Park at Coonoor and the Burliyar Gardens were maintained during the year. The flower-beds and the conservatory at Ootacamund were kept filled with a succession of suitable flowering plants. Seedlings of *Paspalum dilatatum*, Poir., a grass which is said to be a drought-resisting fodder plant, grew well in Sim's Park and at Burliyar. A few thousand seedlings of the camphor tree were raised. An experiment with a mixture of seeds including clover, etc., was unsuccessful. The Sim's Park reserve, adjoining Sim's Park, was placed in charge of the Curator. Experiments with rubber-yielding trees were undertaken at Burliyar. A plot of ten acres in the Burliyar reserve was cleared and a small nursery was opened. The abandoned forest nurseries at Kullar and Benhope were placed under the charge of the Curator.

Cinchona. *Part II, pages 160, 161.*

44. Excepting the Hooker estate, the cinchona plantations throve satisfactorily during the year. The mortality on the Hooker estate, 105,080 plants, was considerably greater than in the two previous years. The year's crop amounted to

154,044 lbs. of crown and hybrid bark. The annual yield from the existing plantations has been fixed for the present at 3,000 lbs. of quinine; this amount is represented by 85,750 lbs. of bark of 3½ per cent. quality. The bark taken from picked trees on the Dodabetta estate was extremely rich, and this fact augurs well for the success on the Nilgiris of the system of propagation by seed from trees selected on analysis of their bark. New machinery for dealing with the bark by the shale-oil process was installed during the year; many initial difficulties were met with and the machinery was not in full working order till November. The average cost of working up each pound of bark was about 36 per cent. less than in the previous year, and the average cost of manufacture of a pound of quinine was reduced to Rs. 14-13-2. The quantity of quinine distributed (11,978¼ lbs.) was the largest on record. Quinine was supplied to the Army Medical Stores, to Local Governments for supply to public institutions or for sale under the pice-packet system, and, in the Presidency, to local boards' dispensaries and, under the pice-packet system, to post-offices and Collectors. The number of pice-packets sold in the Presidency increased. The bye-products extracted in the manufacture of quinine did not command a ready sale and the stock on hand increased. The balance-sheet showed a loss of nearly Rs. 7,300 owing to the fact that the prices charged and realised during the year did not cover the high cost of production of the quinine manufactured in the previous year.

Forests. *Part II, pages 161 to 166.*

45. The area of reserved forests was extended by more than 500 square miles to over 17,000 square miles, the area of reserved lands being correspondingly diminished. A quarter of the area remaining at the beginning of the year to be constituted reserved forests were so constituted during the year; the work done under the various processes of Forest Settlement was less than in 1900-1901, as fewer Settlement officers were employed. The length of boundary lines preliminarily demarcated was considerably less than in the previous year, but the average cost per mile was reduced to two-thirds of the cost in 1900-1901; on the other hand the length and average cost of boundary lines permanently cleared rose. Two parties of the Survey of India worked in four districts and the area surveyed by them by triangulation was more than in the previous year, but that surveyed by traversing and topography declined. There was a considerable increase in the area for which working-plans were sanctioned or under preparation. Expenditure on communications, buildings, etc., was much higher than in 1900-1901. The number of forest offences reported during the year rose, the increase being particularly marked in cases of unauthorized felling and illicit grazing. Most of the cases of incendiarism remained undetected. While the total number of cases disposed of increased, the number undetected or withdrawn for other reasons declined, but the number compounded rose; in cases in which prosecutions were instituted the percentage of acquittal fell to 9·91. The average cost of protecting a square mile from fire was higher than in 1900-1901; but the measures taken in this respect were not as successful as in that year. There was a satisfactory rise in the number of animals grazed under licenses, the increase being particularly marked in the case of sheep and goats, notwithstanding the fact that grazing and browsing were prohibited over a greater area than in the previous year. The increase in licensed grazing was accompanied by a marked decline in the number of animals impounded, thus indicating that the people are adapting themselves to the restrictions necessary for conservancy. Natural reproduction was much retarded by fires, but in some parts of the country satisfactory results were obtained especially in felled coupes. The area in which cultural operations were carried on increased, and artificial

reproduction was generally successful. In order to enable demands for forest-produce to be met more easily than hitherto, additional permit-issuing stations were established and depots and coupes were opened. The quantity of forest-produce extracted was greater than in 1900–1901 under every head except timber. The increase in fuel-supply was due to the requirements of railway companies and of the camps for Boer prisoners of war. Both the gross receipts and expenditure increased, the receipts reaching nearly a quarter of a crore of rupees. The conduct of the protective staff continued to be unsatisfactory, numerous dismissals and suspensions of forest guards and watchers for misconduct and neglect of duty being necessary.

Mines and quarries. *Part II, pages 166, 167.*

46. The only mines of importance were the mica mines in Nellore district and the manganese mines in Vizagapatam. Several fatal accidents occurred in Nellore district owing to the sudden collapse of the sides of the open quarries excavated in mica mining.

Manufactures. *Part II, page 167.*

47. The chief industries carried on in factories during the year were cotton-pressing and ginning, cotton-spinning and weaving, tanning of hides and skins, refining sugar, oil-pressing, bone-crushing, tobacco-curing and tile-making. The number of cotton-pressing and ginning works increased, but they gave employment to fewer hands than in 1900-1901. Nearly 13,000 persons were employed in cotton mills. The arrangements in force for the fencing of machinery appear to have been generally adequate, but the number of accidents increased.

Sea-borne trade. *Part II, page 168.*

48. The total value of the sea-borne trade of the Presidency in the official year 1901–1902, excluding treasure and transactions on account of Government, rose to 30 crores and 83½ lakhs of rupees. The increase of Rs. 14 lakhs was the net result of an increase of Rs. 39 lakhs under imports and of a decrease of Rs. 25 lakhs under exports.

External trade. *Part II, pages 168 to 173.*

49. The total value of the external trade, *i.e.*, trade with foreign countries, with Indian ports not British, and with British ports in other Presidencies, amounted to 28 crores and 19½ lakhs of rupees or Rs. 34 lakhs more than in 1900–1901. Exports contributed 15 crores and 21¾ lakhs of rupees or 53·97 per cent. of the total value of the trade, and imports 12 crores and 97¾ lakhs of rupees or 46·03 per cent. Compared with 1900–1901, the exports show a decrease of Rs. 14¼ lakhs or ·93 per cent. and the imports an increase of Rs. 48½ lakhs or 3·88 per cent. The net decrease of Rs. 14¼ lakhs under exports was the result of a decrease of Rs. 17 lakhs under exports of Indian produce and manufactures and of an increase of Rs. 2¾ lakhs under exports of foreign merchandise. The more important Indian articles of export, *i.e.*, those whose annual value exceeded half a crore of rupees, were hides and skins, seeds, coffee, grain and pulse, raw cotton, spices, oils, cotton piece-goods and coir yarn and ropes, which in all contributed 73·27 per cent. of the total exports of Indian articles. The largest decreases were in the exports of hides and skins (one crore of rupees) and of cotton (Rs. 46 lakhs), and the largest increases in those of seeds (Rs. 72 lakhs) and of grain and pulse (Rs. 57 lakhs). The decrease in the exports of hides and skins was due to the abnormal exports in 1900–1901, as the cattle mortality was large during the famine of that year in Northern India, whence the hides found their way to Madras as the system of curing in its tanneries is better than that obtaining in Northern India. The decrease in the export of cotton was due to the preference given by European countries to the long-stapled American and Egyptian cotton over the inferior Indian article and to short crop. The increase in the exports of seeds and grain and pulse was due to large

exports of ground-nuts and gingelly seeds and rice owing to the favourable season. Compared with 1900–1901, the imports of foreign merchandise increased by Rs. 112½ lakhs or 14·64 per cent. while those of Indian produce declined by Rs. 64 lakhs or 13·31 per cent. The largest items of import were cotton piece-goods, grain and pulse, cotton twist and yarn, metals, railway materials and kerosine oil which together contributed 62·91 per cent. of the total value of imports.

Imports and exports of private treasure. *Part II, pages 173, 174.*

50. The total value of imports and exports of private treasure during 1901–1902, excluding movements between the British ports within the Presidency, amounted to 1 crore and 19¼ lakhs of rupees, being Rs. 10¾ lakhs or 9·91 per cent. more than in the previous year. Compared with 1900–1901, the imports and exports of gold show an increase of Rs. 19 lakhs and Rs. 6½ lakhs respectively. The imports of silver increased by Rs. 4¼ lakhs, but the exports declined by over Rs. 19 lakhs and fell short of imports by more than Rs. 21 lakhs.

Roads. *Part II, page 178.*

51. Excluding streets and roads within the limits of municipalities, over 13,300 miles of metalled roads and nearly 10,000 miles of unmetalled roads were maintained by public authorities, but only 190 miles of metalled roads and 322 miles of unmetalled roads were maintained by the Public Works Department, which spent nearly Rs. 4 lakhs on original works and over Rs. 1¾ lakhs on repairs, other roads being maintained by local boards and union panchayats. The Anamalai ghat road was nearly completed.

Open railways. *Part II, pages 178 to 180.*

52. The length of the railways open for traffic in the Madras Presidency at the end of 1901–1902 rose from 3,220·58 miles to 3,249·33 miles. The additional mileage was due to the opening of the Calicut-Badagara Section (28·75 miles) of the Calicut-Azhikal Extension of the Madras Railway.

Railways under construction and survey. *Part II, pages 180 to 184.*

53. The railways under construction during the official year 1901–1902 by the Madras Railway Company were the extension of the East Coast Railway (now called the North-East Line) from Korukkupettai to a junction with the Madras Railway at Basin Road (0·88 miles) and a Loop Line from Washermenpet to Basin Road (1·05 miles); the Badagara-Azhikal Section (31·09 miles) of the Calicut-Azhikal Extension; the Shoranur-Cochin Line (64·83 miles, metre gauge). The South Indian Railway Company were constructing the Pamban Branch from Madura to Pamban (91·33 miles), the Travancore Branch from Tinnevelly to Quilon (108·27 miles), and the Mutupet-Arantangi Section (44·86 miles) of the Tanjore District Board Railway. Surveys of lines from Azhikal to Mangalore (77·76 miles), and from Salem to Atur (36 miles) by the Madras Railway Company, and of a line from Guntúr to Ponnur and Repalli (46 miles) by the Southern Mahratta Railway Company, were either sanctioned or undertaken during the year.

The Madras Railway. *Part II, page 178.*

54. The total capital expenditure on the Madras Railway up to the end of the calendar year 1901 was Rs. 12,51,36,222 or Rs. 1,48,266 per mile, and the net profits for the year amounted to Rs. 57,67,635 or 4·61 per cent. on the capital outlay. The gross earnings (Rs. 1,14,56,379) showed an increase of Rs. 3,26,049 and the working expenses (Rs. 56,88,744) were Rs. 70,766 less than those of the previous year. The number of passengers carried was 7,778,413, and the tonnage lifted was 944,906 tons. The total capital expenditure on the extension from Calicut to Azhikal was Rs. 59,44,864. The section of line from Calicut to Badagara 28·75 miles long was opened for public traffic on the 1st October 1901. The gross earnings up to 31st December 1901 amounted to Rs. 30,424, working expenses to Rs. 12,456, and the net earnings to Rs. 17,968. The number of passengers carried was 102,808, and the tonnage lifted was 1,360 tons. The total capital expenditure

on the North-East Line of the Madras Railway from Washermenpet to Waltair was Rs. 6,07,27,375 or Rs. 1,22,868 per mile and the net profits were Rs. 21,50,586 or 3·54 per cent. on the capital outlay. The gross earnings were Rs. 45,78,827 and the working expenses Rs. 24,28,241. The number of passengers carried was 3,107,617, and the tonnage lifted was 499,257 tons. On the Kolar Gold Fields Railway the total capital expenditure up to the end of 31st December 1901 amounted to Rs. 11,20,330 or Rs. 1,13,394 per mile and the net earnings were Rs. 91,877 or 8·26 per cent. on the capital outlay. The gross earnings (Rs. 2,17,661) showed an increase of Rs. 8,769 and the working expenses (Rs. 1,25,784) were Rs. 16,015 less than those of the previous year. The number of passengers carried was 549,930, and the tonnage lifted was 78,575 tons. The total capital outlay on the Nilgiri Railway amounted to Rs. 48,74,254 or Rs. 2,88,417 per mile and the net profits Rs. 1,37,883 or 2·83 per cent. on the capital outlay. The gross earnings amounted to Rs. 2,41,336 and the working expenses to Rs. 1,03,453 showing an increase of Rs. 42,298 and Rs. 28,063 respectively over those of the previous year. The number of passengers carried was 69,407, and tonnage lifted was 15,013 tons.

The South Indian Railway. *Part II, page 179.*

55. On the South Indian Railway the total capital expenditure was Rs. 7,60,28,752 or Rs. 73,555 per mile and the net profits Rs. 54,60,767 or 7·21 per cent. on the capital outlay. The gross earnings amounted to Rs. 1,01,44,658 and the working expenses to Rs. 46,83,890, and were greater than those of the previous year by Rs. 12,39,832 and Rs. 2,07,451 respectively. The number of passengers carried was 12,125,270, and the tonnage lifted was 930,999 tons. On the Tanjore District Board Railway from Máyavaram to Mutupet the capital expenditure was Rs. 25,51,236 which is equal to Rs. 47,175 per mile and the net profits were Rs. 1,35,765 or 5·32 per cent. on the capital outlay. The gross earnings amounted to Rs. 2,90,637 and the working expenses to Rs. 1,54,872, and were in excess of those of the previous year by Rs. 58,356 and Rs. 20,374 respectively. The number of passengers carried was 1,124,293, and the tonnage lifted was 70,182 tons. The total capital expenditure on the Peralam-Karaikkal Railway was Rs. 7,23,785 or Rs. 49,405 per mile, and the net earnings were Rs. 13,314 or 1·84 per cent. on the capital outlay. The gross earnings amounted to Rs. 30,450 and the working expenses to Rs. 17,136. The number of passengers carried was 162,835, and the tonnage lifted was 6,868 tons.

Bezwada Extension Railway. *Part II, page 180.*

56. On the Bezwada Extension Railway which was transferred to the control of the Madras Government from the 1st January 1901, the capital expenditure amounted to Rs. 11,65,121, which is Rs. 54,267 per mile, and the net earnings amounted to Rs, 1,56,929 equal to 13·47 per cent. on the capital outlay. The gross earnings amounted to Rs. 2,77,177, a falling off of Rs. 79,269, while the working expenses Rs. 1,20,248 showed an increase of Rs. 2,791 over those of the previous year. The number of passengers carried was 206,920, and the tonnage lifted was 88,721 tons.

Irrigation. *Part II, pages 184 to 187.*

57. The total amount spent on irrigation works was slightly less than in 1900–1901, but still exceeded half a crore of rupees. The area irrigated, including first and second crops, and the revenue derived from irrigation works rose considerably, the area being more than 68¾ lakhs of acres and the revenue exceeding two and a third crores of rupees. If allowance is made for interest, the loss incurred during the year on account of the Rushikulya project, which is the only major protective work in the Presidency, was nearly one and-a-half lakhs of rupees. Seven and a half lakhs of rupees were spent on eight major productive works, Rs. 2½ lakhs

being spent on the Kistna delta, over two lakhs on the Cauvery delta and nearly Rs. 1⅓ lakhs on the Pennér river canals. The profit on these works represented 5·83 per cent. on the capital spent on them or, if the Kurnool-Cuddapah canal be excluded from the calculation, 10·17 per cent. The working expenses fell slightly and were nearly a quarter of a crore of rupees. Two new minor works, for which capital and revenue accounts are kept, were sanctioned during the year. The amount of capital spent on such works was near two and a half lakhs of rupees, bringing the total amount spent on them to more than a crore of rupees. There was a marked rise in the revenue due to improvements which amounted to over ten lakhs of rupees; or, allowing for the working expenses, seven lakhs of rupees. Nearly four lakhs of rupees were spent on the restoration of tanks, in connection with which capital and revenue accounts are not kept. Up to the end of the year about 35 per cent. of the work to be done under the Tank Restoration Scheme had been carried out. An officer was placed on special duty to prepare materials for the Irrigation Commission.

V.—REVENUE AND FINANCE.

Gross revenue. *Part II, pages 188 to 191.*

58. The gross revenue and expenditure under Imperial, Provincial and Local funds taken together rose from Rs. 1,648 and Rs. 952¾ lakhs in 1900–1901 to Rs. 1,699¼ and Rs. 982½ lakhs. The surplus of the year was thus Rs. 716¾ lakhs, or Rs. 21½ lakhs more than in the previous year. The net amount remitted to other provinces including payments of bills of the Secretary of State rose from Rs. 533½ lakhs in 1900–1901 to Rs. 595 lakhs. The amount paid as interest on Government securities fell from Rs. 33¼ lakhs in the previous year to Rs. 32¼ lakhs. The balance of small silver coins in the treasuries at the close of the year declined from about Rs. 10½ lakhs at the beginning of the year to nearly Rs. 6¼ lakhs. Nearly Rs. 4½ lakhs in small silver were sent to other provinces. The balance of copper fell from Rs. 3½ lakhs on the 31st March 1901 to Rs. 3 lakhs on the 31st March 1902. The amount of copper in local circulation fell from Rs. 1¼ lakhs in 1900–1901 to Rs. 0·82 lakh.

Land-revenue. *Part II, page 192.*

59. The receipts from land-revenue amounted to Rs. 559½ lakhs, while they were Rs. 556¾ lakhs in the preceding year. The improvement was due mainly to the favourable character of the season, to the collection of arrears outstanding at the close of the previous year, and to the introduction of the new rates of assessment in Malabar. The charges under this head rose from Rs. 52¾ lakhs to nearly Rs. 53 lakhs.

Canal revenue. *Part II, page 192.*

60. The receipts derived from navigable canals were less than in 1900–1901 in the case of every canal and the total receipts fell by Rs. 10,000 to two lakhs of rupees.

Customs. *Part II, pages 192, 193.*

61. The receipts from Sea-customs rose from Rs. 36¾ lakhs to nearly Rs. 45½ lakhs chiefly owing to increased exportations of rice to Ceylon and Mauritius and to the rise under import duty on petroleum, sugar and cotton manufactures. The receipts from Land-customs also rose from three quarters of a lakh of rupees to Rs. 1½ lakhs, the rise being due to the increase in the exports of rice just mentioned. Owing to the amalgamation of the Customs with the Salt and Abkári department, charges due to Land-customs are no longer shown separately from charges due to Sea-customs. The total charges under Customs which amounted to Rs. 2¾ lakhs were slightly in excess of those of the previous year.

62. In consequence of the change of system recently introduced, by which Government have become the sole importers of opium, the receipts rose from a little over Rs. 3½ lakhs to a little over Rs. 4½ lakhs, the rise representing mainly the gain on the sale proceeds of opium. The charges, which are inconsiderable in amount, also rose. **Opium.** *Part II, page 193.*

63. No important change took place during the year in the administration of salt-revenue. The outturn of salt was higher than that during any of the four preceding years and exceeded that of the previous year by 4¾ lakhs of maunds. The issues fell by a little more than 1¼ lakhs of maunds. The revenue under this head rose from Rs. 186¼ lakhs in the previous year to Rs. 191½ lakhs. The increase occurred almost entirely under Government salt sold for home and inland consumption and under excise-salt, and was due to a net increase in the realisations on account of credits owing to large credit-sales in the second half of 1900–1901. **Salt.** *Part II, pages 193, 194.*

64. The revenue from excise began to recover and rose from Rs. 132¼ lakhs to Rs. 138½ lakhs. The charges on the other hand fell from a little over Rs. 10 lakhs to a little less than Rs. 10 lakhs. **Excise.** *Part II, page 194.*

65. The revenue from stamps advanced from a little over Rs. 85½ lakhs in 1900–1901 to Rs. 87 lakhs. The increase represents the normal growth of revenue. The charges also rose from Rs. 3¼ lakhs to about Rs. 3½ lakhs, the increase corresponding to the rise in the receipts. **Stamps.** *Part II, page 194.*

66. The receipts from income-tax, which show an annual growth, amounted to nearly Rs. 28¾ lakhs or a little over a lakh of rupees in excess of those of the previous year. The charges were slightly over a quarter of a lakh of rupees as in 1900–1901. **Assessed taxes.** *Part II, page 194.*

67. The receipts and charges of the Forest department, which were nearly Rs. 25½ lakhs and Rs. 16½ lakhs respectively, were somewhat better than those of the preceding year. The surplus in the year under report was thus Rs. 2¾ lakhs more than in 1900–1901. **Forests.** *Part II, page 194.*

68. The receipts from other taxes levied for Imperial purposes rose by over Rs. 1½ lakhs to nearly Rs. 232½ lakhs; the receipts under five heads were more than in 1900–1901 and under three heads were less. The receipts from State Railways rose by over Rs. 1½ lakhs as the traffic receipts of the South Indian Railway increased by about Rs. 13 lakhs and those of the Madras Railway North-East Line and the Mysore State Railway fell by about Rs. 11 lakhs and half a lakh of rupees respectively. The decrease in the receipts of the Madras Railway was only nominal, as it was due to the inclusion of the earnings of the Bezwada Extension Railway and of the Waltair-Barang section of the East Coast Railway for nine months in the receipts of the previous year. The increase in the receipts of the South Indian Railway was due mainly to the traffic in grain. The expenditure from Imperial funds on items other than those already mentioned rose by Rs. 31 lakhs to Rs. 236 lakhs; the increase was the result of increments in the expenditure under fifteen heads and decreases under ten heads. The increase of Rs. 1⅓ lakhs in expenditure on 'Scientific and other minor departments' was due chiefly to the heavy charges connected with the census. The expenditure on 'Stationery and Printing' declined from nearly four lakhs of rupees to Rs. 80,000 mainly because the source of supply of certain articles was transferred from India to England. The expenditure on the construction of State railways rose from nearly Rs. 45½ lakhs to Rs. 89¾ lakhs, on account of the large outlay on the construction of Pámban and Travancore branches **Other taxes levied for Imperial purposes.** *Part II, pages 194 to 196.*

of the South Indian railway. A negative entry of Rs. 12½ lakhs under 'Construction of Railways' represents the adjustment of the purchase-money of the Tanjore District Board Railway due by the Tanjore district board to Government.

Provincial revenues. *Part II, pages 196 to 198.*

69. The receipts on account of Provincial revenues rose by half a crore of rupees to Rs. 378½ lakhs; the expenditure from Provincial funds increased by Rs. 6 lakhs to Rs. 337¾ lakhs; the deficit of Rs. 3¼ lakhs at the beginning of the year was therefore changed into a surplus amounting to Rs. 40¾ lakhs. This was mainly due to a special contribution of over Rs. 32 lakhs from Imperial funds in addition to Rs. 10 lakhs granted by the Government of India for expenditure on public works in 1902–1903. The expenditure under 'Irrigation and Navigation—Public Works Officers' rose by a lakh of rupees on account of liberal grants for agricultural works in Gódávari, Kistna and Trichinopoly districts. A grant of Rs. 1½ lakhs to the Madras municipality for expenditure in connection with plague led to an increase of over a lakh of rupees in the charges under 'Civil Works—Civil Officers.' As the programme of works was larger than in the previous year, the charges under 'Civil Works—Public Works Officers' increased by over three lakhs of rupees.

Local funds.
Local boards. *Part II, pages 198 to 201.*

70. Exclusive of debt transactions, the receipts of local boards rose by over Rs. 2¼ lakhs to Rs. 90 lakhs. The increase of Rs. 1¾ lakhs under 'Provincial rates' is ascribed to the favourable character of the season and the prompt collection of arrears as well as of cesses due for the current year. The expenditure rose by nearly Rs. 17¾ lakhs to over one crore of rupees. The charges under 'Medical' increased by over a lakh of rupees on account of plague, and the charges under 'State Railways' were more than a lakh of rupees in excess of those of the previous year on account of a rise in the working expenses of the Tanjore District Board Railway and to the adjustment of interest due on money advanced for that railway by Government. The expenditure of Rs. 2 lakhs under 'Construction of Railways' was due to the extension of the same railway to Arantangi. The funded capital of local boards fell from Rs. 23 lakhs to Rs. 16 lakhs during the year. The receipts

Village-service funds.

appertaining to 'Village-service funds' rose by Rs. 2¼ lakhs to Rs. 54½ lakhs and the expenditure increased by one lakh of rupees to Rs. 51½ lakhs; the balance rose

Port and Marine funds.

from Rs. 2¼ lakhs to Rs. 5¼ lakhs. The receipts on account of Port and Marine funds advanced from Rs. 7½ lakhs in 1900–1901 to Rs. 10½ lakhs, while the expenditure fell from Rs. 10⅓ lakhs to Rs. 7⅔ lakhs and the balance rose to nearly three lakhs of rupees.

Municipal revenues.
Mufassal municipalities. *Part II, pages 201 to 203.*

71. Excluding the opening balance, the total receipts of mufassal municipalities amounted to nearly one-third of a crore of rupees and were almost two and-a-half lakhs of rupees in excess of the receipts during the previous year. An increase occurred chiefly in the receipts derived from taxation, loans and advances, but it was partly counterbalanced by a decline in the grants made by Government. There was a slight increase in the average incidence of municipal taxation per head of population. This was due in part to the enhancement of the rates at which the tax on buildings was levied in three municipalities and to the levy of the tax on lands in the municipality of Nandyal for the first time. The work of collecting the current taxes was better than in the previous year, but only about half the arrears were collected. The income derived from sources other than taxation rose by over two lakhs of rupees—more than 16 per cent. of similar receipts in the previous year. The revenue from conservancy receipts was much larger than in 1900–1901 and the further extension of the private scavenging system led to an increase of

10 per cent. in the recoveries for services rendered to private individuals. The municipalities borrowed nearly two lakhs of rupees from Government, and the municipal council of Ootacamund borrowed Rs. 13,500 in the open market. The total expenditure exceeded the receipts, excluding the opening balance, by over three lakhs of rupees and was more than the expenditure during the previous year by nearly five and-a-quarter lakhs. The increase was chiefly in charges connected with public works, sanitation and advances. Thirty-one per cent. of the expenditure was on public works and nearly as much was spent on medical relief, vaccination, registration of vital statistics and sanitation. The aggregate closing balance of all municipalities was 22·1 per cent. of their receipts; two municipalities had deficit-balances at the close of the year.

72. The receipts of the municipality of Madras declined from nearly Rs. 26 lakhs in 1900–1901 to over Rs. 18 lakhs; the difference is more than accounted for by the fact that the loans in the year under report amounted to only Rs. 29,000, while in the year 1900–1901 Rs. 10,30,000 were borrowed by the municipality. The funds at the disposal of the commission were Rs. 21¾ lakhs or Rs. 7¾ lakhs less than in the previous year. On account of a special grant of Rs. 1½ lakhs by Government in connection with plague, the contributions from Government showed a considerable increase. The charges fell from nearly Rs. 26 lakhs to Rs. 19⅓ lakhs, the difference being due mainly to the decrease from Rs. 8⅓ lakhs to Rs. 2¾ lakhs in the expenditure on new drainage-works.

City of Madras. *Part II, pages 203, 204.*

VI.—VITAL STATISTICS AND MEDICAL SERVICES.

73. A census of the people of the Presidency was taken on the night of the 1st March 1901 in connection with the general synchronous census of India. The population within British territory was ascertained to number 38,199,162, that is, 2,568,722, or 7·2 per cent., more than that returned at the census of 1891. An increase occurred in every district in the Presidency and in Kistna the rise was over 16 per cent. Males numbered 18,836,313 and females 19,362,849. The latter increased faster than the former, the proportion of the gentler to 1,000 of the sterner sex rising from 1,023 to 1,029. Hindus numbered 34,048,082, Musalmans 2,457,088 and Christians 1,024,071. The number of occupied houses was 7,125,160, or 50 to each square mile, and the density of the population per square mile was 270 against 253.

Census. *Part II, pages 205 to 212.*

74. Registration of births and deaths was compulsory in all municipalities and in 441 villages under Madras Act III of 1899. The number of births registered during the year 1901 was nearly 11 per cent. less than in 1900, and the birth-rate fell to 25·1 per mille; in municipalities the birth-rate was 32·6 per mille. From this it appears that the registration of births is still incomplete, but the high prices which have prevailed during the past two years may have had an effect on fecundity, and led to a real decrease in the birth-rate. The number of deaths registered rose by more than 3 per cent. and the death-rate was 21·3 per mille; in municipalities the rate was 35·4 per mille, and in the city of Madras the mortality was exceedingly heavy, the death-rate being 55·5 per mille. The death-rate of infants rose to 166·2 per mille of registered births, but is probably still far below the actual death-rate, as the calculated rate for the city of Madras was 295 per mille; the mortality among female infants exceeded that among male infants in no district except the

Births and deaths. *Part II, pages 216 to 218.*

Nilgiris. The number of deaths from cholera increased by more than a third, but the number of deaths from small-pox was slightly less than in 1900. The number of persons attacked with plague was 3,960, and 76·6 per cent. of them died. The number of persons killed by wild animals was slightly more than in 1900, but the number killed by snakes was appreciably less. Fewer wild animals were killed than in the previous year, and the total amount of rewards paid for their destruction was nearly 22 per cent. less than in 1900.

Emigration and immigration. *Part II, page 218.*

75. There was a marked advance in the regulated emigration to Natal and Mauritius. Unauthorized emigration from the French port of Pondicherry to Madagascar was a failure, as several of the emigrants returned in a pitiable state on account of diseases contracted on the plains. The non-regulated emigration to the Straits Settlements, Burma and Ceylon decreased considerably on account of the favourable character of the season in the districts from which the emigration usually takes place. There was a slight increase in the number of immigrants by sea; they came chiefly from Burma, the Straits Settlements and Ceylon. A few emigrants returned from Natal, La Réunion, Guadaloupe and Mauritius with savings.

Medical relief. *Part II, page 219.*

76. Though the number of medical institutions fell by three, the number of beds available for patients rose and more in-patients and more out-patients were treated than in 1900. Though the percentage of in-patients who were cured rose slightly, there was again a marked increase in the proportion of in-patients who died, even if those admitted in a moribund condition are excluded from the calculations. The principal diseases treated were ulcers and diseases of the skin, diseases of the digestive system, malarial fevers and worms. There was again a considerable increase in the number of packets of quinine sold to the public at post-offices. The gross income of medical institutions during the year was higher than in the previous year; forty-five per cent. of the income was contributed from local and other funds, $27\frac{1}{4}$ per cent. by Government and $18\frac{1}{2}$ per cent. from municipal funds. Although there was a rise in the average cost of each patient, the average cost of diet of in-patients declined.

Lunatic asylums. *Part II, page 220.*

77. The accommodation in the three lunatic asylums continued to be ample, but the daily average number of in-patients increased. The commonest form of insanity was mania, and in nearly one-third of the cases treated, in which the cause of insanity was known, it was due to moral causes.

Sanitation. *Part II, pages 220, 221.*

78. The extension of the water-works at Trichinopoly and the construction of water-works at Vizagapatam and Cocanada were in progress during the year and a scheme for the supply of water to Ootacamund from the Tiger Hill reservoir was under execution. Plans and estimates for water-works in seven municipalities and for the improvement of those in five municipalities were submitted by the Sanitary Engineer. The Sanitary Board submitted to Government nine schemes relating to water-works and two relating to drainage. The progress in sewage-farming, sewage-filtration and the employment of urban rubbish and night-soil and sewage-filtrates for agricultural purposes continued. The Sanitary Board issued some new type-designs and type-plans.

Vaccination. *Part II, page 221.*

79. Although the number of vaccinators was less than in 1900, more vaccinations and more revaccinations were performed; the number of primary vaccinations was considerably more than the number of births registered, but the number of infants, who were vaccinated successfully, was only a little more than a quarter of the estimated number of children under one year of age. The increase in vaccination is ascribed to the fact that the people are abandoning the idea that vaccination

is a means of infecting with plague. The percentages of successful operations were about the same as in the previous year; calf-to-arm vaccination again gave the best results (98·4 per cent.). To remove difficulties felt in obtaining an adequate supply of good lymph, it is proposed to establish a Vaccine Institute at Guindy near Madras.

VII.—INSTRUCTION.

Educational Conference. *Part II, page 240.*

80. The most important event of the year in connection with public education was the institution of the conference which sat at Simla under the presidency of the Viceroy towards the end of 1901, when questions connected with all branches of education were discussed and several improvements were considered.

Institutions and scholars. *Part II, pages 240 to 242.*

81. A noticeable decline in the number of public institutions was accompanied by a marked increase in the number of pupils attending them; the number of private institutions also fell slightly, but there was again a considerable increase in the number of pupils attending them. Though the increase in scholars is indicative of progress, the rate, at which education spreads, appears to be diminishing. The increase in the number of pupils extended to all standards of institutions, but only 15·8 per cent. of the entire number were beyond the lower primary stage. Of the total number of institutions 88 per cent. were under private management, but about half of these were aided. The percentage of male scholars in public institutions to the male population of school-age rose to 21·8, but the corresponding percentage of female scholars was again four. The numbers of schools and scholars in municipalities increased during the year, but in rural areas a rise in the number of scholars accompanied a fall in the number of schools. The expenditure on education from local funds and municipal funds declined during the year, but more was spent from provincial revenues and from other sources and there was a marked rise in the fees on account of the increase in the number of pupils. The direct expenditure exceeded that of the previous year by nearly Rs. 1¾ lakhs and amounted to Rs. 58⅔ lakhs, while the indirect expenditure, which was nearly Rs. 20⅔ lakhs, was about Rs. 3¼ lakhs more than in 1900–1901. Nearly 58 per cent. of the total expenditure appertained to secondary and primary education and 83·4 per cent. of the total expenditure on primary and secondary schools for boys was spent on the former. Of the expenditure 30·6 per cent. was met from fees, 28·25 per cent. from private sources and 27·83 per cent. from provincial revenues. The average cost of education per head of population rose to As. 3–3. More was spent on scholarships from public funds than in the previous year. The fixed grant system continued to find favour with managers and the fixed grants paid from provincial and municipal revenues rose slightly, but those paid from local funds declined. The fall in the number of schools aided under the results-grant system was due to the strict enforcement of the rules of recognition; the earnings of boys' schools rose appreciably in spite of the decline in their number.

The University. *Part II, pages 245, 246.*

82. The by-laws relating to Matriculation in the University were revised. The number of candidates admitted to degrees was 24 per cent. higher than in 1900–1901 and was the largest during the past quinquennium. At the examination for the M.A. degree the number of candidates was less than in any of the past six years. The success in the examination for the B.A. degree was much higher than in 1900–1901, and 33 per cent. more persons qualified for the degree than in the previous

year. An increase in the number of candidates for the First examination in Arts was accompanied by a fall in the percentage of success. At the examinations in other faculties greater success was generally achieved than in the previous year, but the percentage of success in the examination for the degree in Engineering was lower than in any other year in the past quinquennium. The improvement in the results of the Matriculation examination was very marked and may have been due to increased strictness in the selection of candidates.

Colleges. *Part II, pages 247 to 249.*

83. The number of first-grade arts colleges remained the same as in the previous year, but one second-grade college was reduced to a high school. There was a considerable increase in the number of students at the Presidency College, and a marked fall in the net cost of each student. Attendance at the Law College also improved; the financial results were a small profit in place of a deficit of over Rs. 10,000 in 1900–1901; the sanction of the Secretary of State to the reorganization of the college was received during the year. The number of students in the Medical College again increased, but both the receipts and expenditure were materially reduced. The reorganization of the professorial staff under the new scheme necessitated a redistribution of chairs; the Principal, who had formerly been Professor of Medicine, was relieved of his teaching work. The strength of the College of Agriculture fell slightly; the students were able to enjoy more opportunities of engaging in practical work on the farm than in the previous year. Two agricultural excursions were undertaken during the year. The results of the various examinations were fairly good. The number of students attending the Engineering College remained almost stationary. Some of the students went for a tour in the districts of Kistna and Gódávari. Good results were obtained in the technical examinations, though, except in the case of the Sub-Overseer and Surveyor class, they compared unfavourably with those in the previous year. The net cost of each student was materially reduced. The strength of the Teachers' College, Saidapet, remained steady; the results of examinations and the conduct of members of the hostels were satisfactory. A hostel for Christian students was built during the year.

Upper Secondary Education. *Part II, pages 249, 250.*

84. Though the number of candidates who appeared for the upper secondary examination was higher than in 1900–1901, it was still very low. During the twelve years that the examination has been in existence only 49 candidates have completed the test. The number of upper secondary schools increased during the year. The average cost per student in the upper secondary department alone was forty rupees.

Lower Secondary Education. *Part II, page 250.*

85. There was a marked fall in the number of candidates for the lower secondary examination, but the number of private candidates increased considerably. Lower secondary schools increased during the year in number and in strength. The average cost of each pupil was Rs. 21½.

Primary Education. *Part II, pages 251, 252.*

86. The number of candidates for the primary examination was over a quarter of a lakh and was more than a thousand in excess of the number in 1900–1901. Upper primary schools and lower primary schools both fell in number, but the strength of upper primary schools increased. The total number of pupils in primary schools was over five and three-quarter lakhs. Public night-schools fell considerably in number and in strength. The average cost of each pupil in Government, board and aided schools was Rs. 7–14–0, Rs. 4–11–0 and Rs. 3–6–0 respectively, being somewhat more in the first and last than in 1900–1901.

Training of teachers. *Part II, pages 252, 253.*

87. On the whole the number of candidates for trained teachers' certificates and the number of those who were successful diminished, while on the other hand the number of candidates for untrained teachers' certificates, though still bearing a small proportion to those for trained teachers' certificates, increased and more were successful than in 1900–1901. Though an additional training school for masters was opened, the aggregate strength of such schools declined; the cost of each student to Government rose to Rs. 120. There was the same number of training schools for mistresses as in 1900–1901, but the cost of each student to Government fell to Rs. 111. There was a considerable fall in the number of students attending the special classes for gymnastic instructors at Saidapet and Rajahmundry. The number of annual admissions at Saidapet and the number of provincial stipendiaries were reduced, the period of training was extended to one year, the admission of students in the second term was discontinued and it was decided to hold only one final examination a year in future instead of two. Fifty-four sessional schools worked in sixteen districts.

Technical and Industrial schools. *Part II, pages 253, 254.*

88. An increase in the number of subject-candidates that appeared for the several technical examinations was accompanied by a decline in the number that passed, nearly two-thirds of the candidates failing. Female candidates were more successful than male. There was a considerable fall in the number of diplomas and group-certificates issued. The number of pupils attending the School of Arts and other industrial and technical schools declined considerably, but there was a marked increase in the expenditure on technical schools. Of the total expenditure (nearly Rs. 2⅔ lakhs), 28 per cent. was met from provincial funds and 11 per cent. from fees.

Education of special classes. *Part II, pages 254 to 260.*

89. Taking all classes and grades of institutions together the total number of institutions for girls declined, but their strength increased; the number of girls attending boys' schools also advanced. Two women passed the English branch of the examination for the M.A. degree. Of two women who appeared for the examination for the B.A. degree, one qualified for the degree. The number and strength of upper secondary schools for girls advanced, but lower secondary schools for girls declined both in number and in strength. More girls appeared for the primary examination and more passed than in 1900–1901. The number of primary schools for girls declined, but their aggregate strength increased. The work done by zenana agencies was less than in 1900–1901. A slight increase in the number of institutions for Europeans was accompanied by a decline in their strength, which was, however, still 36 per cent. higher than the number of European children of school-age; either all the children of this class are attending school as well as some who are beyond school-age, or the ordinary method of calculating the population of school-age gives erroneous results, so far as Europeans are concerned. The success of Europeans in examinations showed much improvement. There was a satisfactory advance both in the number and strength of institutions for Muhammadans. The results of the examinations were on the whole fair except in the First examination in Arts. There was a considerable rise in the public schools for Mappilla boys both in number and strength. Of the expenditure on Muhammadan and Mappilla schools, 52 per cent. was met from public funds. Schools for Panchamas rose considerably both in number and strength; there was, however, a decrease in secondary schools which may have been due partly to the fact that Panchamas are now admitted more readily into ordinary secondary schools than hitherto. Of the expenditure in Panchama schools, 59 per cent. was met from

Females.

Europeans.

Muhammadans.

Panchamas.

Aboriginal and Hill tribes.

private funds and 34 per cent. from public funds. Schools specially intended for aboriginal and hill tribes were maintained in the agency tracts and in several districts at a total cost of Rs. 46,000, of which Rs. 40,000 were contributed from provincial funds. The number of boys who attended these schools declined, but the number of girls increased. Two schools for blind boys and one for blind girls were maintained as in the previous year, but the two schools for deaf-mutes, one for boys and the other for girls, were amalgamated into one.

Blind and deaf-mutes.

Miscellaneous. *Part II, pages 261, 262.* Physical education.

90. Provision for gymnastic instruction was made in 5,703 schools and colleges out of a total number of 20,792. In the majority of institutions, in which gymnastics are not taught, exercises in drill or calisthenics are taught. The statistics for the year show that 1 in 4 boys and 1 in 23 girls of the school-age were receiving education. The average daily attendance in public schools was 82 per cent. of the number on the rolls. On the whole attendance appears to have been slightly better than in 1900–1901. The hostels are reported to have worked satisfactorily during the year. The number of male boarders in boarding-houses increased considerably but there was a slight fall in the number of female boarders. The majority of the boarding-houses were for Native Christians.

Attendance.

Hostels and boarding-houses.

Special tests. *Part II, page 262.*

91. About a quarter of the candidates for the hand-writing and dictation test were successful. The results of the revenue and judicial special tests were poor, particularly in the case of the test in précis-writing. The results of the special tests for officers of the Salt, Abkári and Separate Revenue department were good.

The Lawrence Asylum. *Part II, page 263.*

92. The number of boarders in the Lawrence Asylum increased; their health was generally good. The receipts of the Lawrence Asylum Press at Madras, rose considerably and the disbursements also rose to some extent; Rs. 24,000 were granted to the Lawrence Asylum in all by the Press at Madras and its branch at Ootacamund.

The Reformatory School. *Part II, page 263.*

93. The teaching staff of the Reformatory School was strengthened. The number of pupils increased slightly. The conduct of the boys showed marked improvement on the whole. Of 24 pupils who were discharged nineteen obtained employment and one emigrated.

Libraries. *Part II, page 264.*

94. The number of institutions possessing libraries and the number of volumes possessed by them increased during the year. Reading-rooms exist in most colleges and in many secondary schools. There was a slight decline in the number of registered reading-rooms but a marked increase in the number of members; both the number and strength of unregistered reading-rooms and literary societies rose considerably.

Periodicals. *Part II, pages 264, 265.*

95. The number of English papers was the same at the close of the year as at the beginning; but Anglo-vernacular and vernacular newspapers and other periodicals rose in number by nine.

Registration of books. *Part II, page 265.*

96. The number of publications registered in 1901–1902 was higher than in any other year in the past decade; about half were in vernacular languages and more than a quarter in English. The majority dealt with religion.

School of Arts. *Part II, pages 272, 273.*

97. There was a considerable decline in the number of pupils attending the School of Arts, as the fees were enhanced and all unpaid apprentices in the industrial department were required to pay fees for attending the drawing classes. As the average daily attendance rose, it appears that pupils who had no serious intentions of following a course of technical study were eliminated. The working of the school was fairly satisfactory, but the results in the various technical examinations were

disappointing; this fact indicates that the teaching side of the school has been somewhat neglected for the industrial. On the artistic side of the school fresco-painting was started with some prospect of success and modelling classes were opened. On the industrial side there was a still further development of the manufacture of aluminium goods and a weaving department was initiated with the object of ascertaining by experiment whether and in what manner the efficiency of hand-loom weavers could be increased. There was a marked rise in the sales in the wood-carving and carpentry department. The pottery department was abolished. The modelling department was started at the beginning of the year.

Museum. *Part II, pages 269 to 271.*

98. The Government Museum continued to be popular and the visitors to the buildings numbered about four hundred thousand. The Superintendent was appointed Superintendent of Ethnography for the Madras Presidency, and he will therefore be enabled to continue more systematically than hitherto the investigations, to which he has for several years past given special attention. Several additions were made in the various departments of the Museum.

Connemara Library. *Part II, page 267.*

99. The Connemara Library made fair progress and the number of readers increased slightly.

Oriental Manuscripts Library. *Part II, pages 266, 267.*

100. The work of acquiring manuscripts for the Government Oriental Manuscripts Library, which had been suspended in 1899, was resumed, and several manuscripts were acquired. There was a further increase in the number of visitors, the majority of whom were copyists. The work of preparing the descriptive catalogue of Sanskrit manuscripts was completed, but not much progress was made in printing it.

Meteorology. *Part II, page 271.*

101. A meteorological observatory was established at Ootacamund. With the object of increasing the utility and accuracy of the daily weather-reports, telegrams from seven additional stations were included in them. The observations were recorded regularly with one exception.

Astronomy. *Part II, page 272.*

102. The construction of the buildings for the Astronomical Observatory at Kodaikánal progressed. A programme of observations was laid down by the Observatories Committee of the Royal Society. Regular observations were begun on 14th March 1901.

VIII.—ARCHÆOLOGY.

Part II, page 274.

103. In Tinnevelly district, excavations of pre-historic sites were continued. Some historical and traditional information was collected at Tiruchendur. In Coorg, a tour was made in Mercara taluk where much interesting matter relating to legends and ceremonial customs was collected. Notes of the antiquities at the places visited were made. In Bellary district, the topographical survey of the remains of Vijayanagar was proceeded with. The archæological survey of Malabar district was continued. At Mamallapuram or the Seven Pagodas, the remains were inspected, and some legendary information collected. Lists of the ancient mounds supposed to cover remains of buildings in Ganjám, Vizagapatam, Gódávari and Kurnool districts were made. The ancient temple at Tirupati in North Arcot district was visited and some legendary information collected. Steps were taken for the conservation of ancient buildings during the year. Other archæological information, including some relating to the Jaina ritual, was elicited and noted. Several stone-inscriptions were copied during the year. An illustrated volume was sent to press. The States tributary to the Government of Madras were included in the scope of the operation of the archæological survey.

IX.—MISCELLANEOUS.

Ecclesiastical. *Part II, page 278.*

104. An honorary chapter of six canons to be attached to the Cathedral Church of St. George in Madras was constituted by the Bishop of Madras. Two deacons were ordained priests during the year and one European and four natives were ordained deacons. The Bishop held his primary visitation of the clergy of the diocese on 15th January 1902. The Church of St. Peter the Apostle at Negapatam was consecrated on 16th March 1902. There was slight decline in the amount of alms and other devotions offered through clergymen ministering to English congregations.

Stationery. *Part II, pages 278, 279.*

105. The Madras Stationery Manual was published during the year; it embodies the orders issued from time to time with a view to secure economy in the working of the department. The value of stationery received was nearly Rs. 40,000 and the value of that issued Rs. 60,000 less than in 1900–1901. A large quantity of printing paper which should have been supplied to departments was not issued owing to its late arrival from England. The value of Indian goods substituted for English goods was about a quarter of the value in the previous year, but the result in 1901–1902 was a considerable saving, while in 1900–1901 the substitution led to large loss.

The Government Press. *Part II, pages 279, 280.*

106. Both the receipts and disbursements on account of the Government Press were higher than in 1900–1901. The value of Acts and other publications issued during the year, and the stock in hand also rose in value. Some additions were made to the plant. Reduced to an equivalent of pica solid foolscap folio, the total numbers of pages set up in type and of impressions struck were less than in the previous year, but the cost of a page set up in type and that of an impression rose, except the cost of impressions struck at the Penitentiary branch. The work in the Binding department continued to increase. The amount of types, etc., cast was more than in 1900–1901, but, as the work was done more economically, the average and total cost declined. There was a slight increase in the number of employés.

District presses. *Part II, page 281.*

107. There was a considerable rise in the charges on account of district presses, which was accompanied by an almost equal fall in the value of work done in them; nearly half the additional charges were, however, met by an increase in the receipts.

The Chemical Examiner's department. *Part II, pages 281, 282.*

108. There was a further increase in the demands made on the resources of the Chemical Examiner's department both in the general miscellaneous and in the medico-legal sections of the work, especially in the former section; in all directions the work of the Chemical Examiner has increased greatly. While the numbers of cases of suspected human-poisoning and of articles examined in connection with them during the year were about the average, the percentage of such cases which were detected was greatly in excess of the percentage in any previous year; this result was due to the gradual introduction of improvements in the methods and in the general quality of the work. The numbers of cases of animal-poisoning and of articles examined in connection with them were less than in 1900, but the percentage of detection rose. The examinations made for the Customs department were nearly 50 per cent. more in number than in the previous year.

Charitable institutions. *Part II, pages 282, 283.*

109. The receipts of the Monegar Choultry, the Native Infirmary, the Foundling Asylum, and Raja Sir Ramaswamy Mudaliyar Lying-in Hospital were more than in 1900 and the expenditure exceeded that of the previous year and was greater than the amount received during the year. The number of women treated

in the Lying-in Hospital decreased by more than 25 per cent. The amount received by the Raja of Venkatagiri's Choultry was the same as in 1900, and the expenditure was slightly less than in the previous year. The receipts and expenditure on account of the Triplicane Langerkhana declined during the year, and there was a slight fall in the daily average number of paupers relieved. Several other institutions were maintained by Government, local boards and private persons at a cost of about twelve lakhs of rupees to provide accommodation or food or both to travellers, paupers, Brahmins, Bairagis, orphans or lepers; on the average about one person per mille of the population of the Presidency received aid or relief daily from these institutions.

Muhammadans in the service of Government. *Part II, page 284.*

110. The proportion of Muhammadans employed in superior service on less than Rs. 250 per annum to the total number of such appointments was considerably in excess of the proportion of Muhammadans to the total population of the Presidency, but it was less in the higher grades, especially among appointments, the pay of which is Rs. 2,500 per annum and upwards; but the proportion of Muhammadans increased during the year in each grade of appointment.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

PART II.

DEPARTMENTAL CHAPTERS, ETC.

PART II.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

PHYSICAL FEATURES OF THE COUNTRY, AREA, CLIMATE AND CHIEF STAPLES.

Situation and boundaries of the Presidency.

1. The present Madras Presidency, or the Presidency of Fort St. George, occupies the southern portion of the peninsula from latitude 20° 18′ on the eastern coast and latitude 14° on the western coast to Cape Comorin in latitude 8° 4′; the longitude ranges from 74° 9′ to 85° 15′. The extreme length of the Presidency, from north-east to south-west, is about 950 miles; its extreme breadth is about 450 miles. The coast-line commences on the north-east at the confines of the large salt lagoon called the Chilka Lake in the Bengal district of Cuttack, and gives a boundary successively to Ganjám, Vizagapatam, Gódávari, Kistna, Nellore, Madras, Chingleput, South Arcot, Tanjore, Madura and Tinnevelly districts, and a small portion of Travancore State, about 1,250 miles of coast in all being washed by the Bay of Bengal, Palk's Strait, and the Gulf of Manár. The coast-line commences on the north-west at the village of Shirúr a few miles south of Bhatkal near the Honáwár estuary, the boundary between the Bombay district of North Canara and the Madras district of South Canara, and gives a boundary successively to South Canara and Malabar districts and Cochin and Travancore States, this coast-line of about 450 miles being washed by the Arabian Sea. On every side but the north, the Presidency is washed by the open sea. The irregular northern boundary has been formed by accidents of history. On the extreme north-east is the Bengal province of Orissa; next come the highlands of the Central Provinces; then across the greater part of the peninsula the Dominions of the Nizám of Haidarábád, separated from Madras by the Kistna river and its tributary the Tungabhadra; lastly, on the north-west by west, the districts of Dhárwár and North Canara in the Bombay Presidency. This description leaves out of account the Mysore and Coorg territories, which geographically speaking form as much a portion of the Presidency as do the tributary states of Travancore and Cochin on the south. The Amíni Divi and Laccadive Islands form for administrative purposes a part of the Madras Presidency, being attached to the districts of South Canara and Malabar respectively. Off the south-east lies the British colony of Ceylon, separated by a shallow strait across which runs the string of rocks and sandbanks known as "Adam's Bridge."

Mountains, rivers and lakes.

2. From a physical point of view the Presidency may be roughly divided into three portions, the long and broad eastern coast, the shorter and narrower western coast, and the high tableland in the interior. These divisions are determined by the two great mountain ranges of the Eastern and Western Ghâts, which give the key to the configuration of all Southern India. The two chains extend along the opposite coasts, parallel to each other, or rather diverging, and leaving between them and the sea only a plain of forty or fifty miles in breadth. They rise in few places above 3,000 or 4,000 feet high; but are very rugged and steep, and the entrance into the interior is only by very narrow and difficult passes. The name of ghát, being applied to these passes, has been gradually extended to the mountains themselves. The Eastern Ghâts, which lie entirely within this Presidency, form a continuation of the hill system of Chutiá Nágpur. They run in a south-westerly direction almost through the entire length of Madras, until they lose themselves in the Nílgiris, and there join with the western range. Their average height is 1,500 feet, and for the most part they leave a broad expanse of low land between their base and the sea. Their line is pierced by the Gódávari, Kistna and Cauvery rivers, as well as by minor streams, so that they do not

perform the part of a watershed. The Western Ghâts, on the other hand, which stretch southwards continuously along the shore of the Indian Ocean from the north of Bombay, satisfy all the characteristics of a mountain range. Rising steeply at a distance of 10 to 50 miles from the coast in the Madras districts, they catch the greater part of the rainfall of the monsoon. Some of their peaks attain an elevation of from 5,000 to 8,000 feet. Though steep and stony, the hills are not broken, but covered generally with a stratum of earth, sustaining stately forests, particularly of bamboo, which is found nowhere else in equal perfection. The interior, between these two chains, consists chiefly of successive tablelands supported by the opposite ghâts and by chains crossing from one to the other, diversified also by single precipitous eminences, which are formed into almost impregnable hill forts. The most southerly central tableland, with an elevation of from 1,000 to 3,000 feet, includes the whole of Mysore and extends over several of the Madras districts. There are again in the south various minor hill systems. The Nílgiris, which form the junction of the two main ranges, culminate in Dodabetta, at one time regarded as the highest peak in Southern India. There are also outlying spurs and masses of hills, of which the Shevaroys in Salem, the Ánamalais in Coimbatore, and the Palni Hills in Madura are the most important. At the Palghat gap the Western Ghâts fall to a height of 1,000 feet above sea-level, by a break 25 miles wide through which runs the principal railroad of the south of India. They then resume their course at full level down to Cape Comorin, and immediately widen out into the highland tract that lies between Madura on the one side, and Malabar, Cochin and Travancore on the other, this highland being known as the Ánamalais in the Coimbatore district and as the Palnis in Madura. The hill tract here mentioned, higher than the Nílgiris in parts and much more extensive, becomes narrower again opposite the Cumbum valley in Madura, and behind Tinnevelly becomes only a mountain range between the two coasts with a restricted area. The Ánaimudi mountain in the Ánamalai range is now known to be the highest in Southern India, its summit being 8,850 feet above the level of the sea.

3. The Ganges and the Indus in the north of India finally absorb all the waters which descend from the southern face of the Himálaya; and these flowing either eastward or westward over the vast plain of Central India, leave between them a large expanse of arid desert bordering on the Indus. All the other waters of India belong to what is called peninsular India. Beginning from the north, the first two that occur flow eastward into the Gulf of Cambay; the Narbadá, parallel to the Vindhya chain, and fed by its streams; and the Taptí, which passes by Surat. There the chain of the Western Ghâts begins, whence all the other large rivers flow eastward into the Bay of Bengal. The principal of these are the Gódávari, the Kistna and the Cauvery; all sacred in the eyes of the Hindu, and truly valuable by their services to irrigation and commerce. These rivers have the same uniform features. They rise in the Western Ghâts, and run across the peninsula in a south-easterly direction. They drain rather than water the upper country through which they flow, and are comparatively valueless there either for navigation or irrigation. But they spread over alluvial deltas before they reach the sea, and at that stage become capable of being restrained and utilized by the engineer. The estimated basin area of the Gódávari is 112,200 square miles, and its length is 898 miles. The estimated basin area of the Kistna is 94,500 square miles, and its length is 800 miles. The estimated basin area of the Cauvery is 327,700 square miles, and its length is 472 miles. Each of these rivers has a large tributary system of its own. Other rivers on the east coast, of similar character but smaller dimensions, are the North and South Pennér or Pinákiní (the southern being called Ponnaiyár), the Pálár, the Vellár, the Vaigai, and the Tambraparni. The area of country drained by rivers running westward is only the narrow strip of territory between the Western Ghâts and the sea. As a rule, the country slopes gradually from the eastern base of the western mountain chain down to the Coromandel Coast, while the fall is sudden and precipitous on the western side of the mountains.

4. It is somewhat remarkable that in so large a region as India, with so many mountains and waters, there should scarcely be a lake. So-called lakes are the Chilka on the Coromandel Coast at the confines of this Presidency, and the Pulicat Lake on the same coast within the Presidency. But these are really mere salt marshes like the Mareotis or Menzaleh. Pulicat Lake, 33 miles in length from

north to south, forms a backwater which used to be more or less important for inland communication between Madras city and the northern districts. This lake is supposed to have been caused by the sea breaking in through the low sandy beach. On the western coast, the perpetual antagonism between the mountain torrents and the ocean has produced a remarkable series of backwaters or lagoons, which skirt the entire seaboard of Canara, Malabar and Travancore. The largest is the backwater of Cochin, which extends from north to south for a distance of 120 miles. These backwaters also are used for inland navigation. A projecting spur of the ghâts for a long time interrupted communication, but this has been tunnelled, and continuous water communication is provided by this means between Cochin and the capital of Travancore.

Climate.

5. The peculiar physical geography of the peninsula with a large mountain chain running from north to south along its western boundary, is of importance in regard to climate and the productions of the various portions of the country. The western hills have the effect of arresting the lower strata of rain clouds brought up from the Indian Ocean by the periodical winds of the south-west monsoon, and of causing excessive rain precipitation on the narrow strip of coast-line on the western side of the peninsula. Where the mountain range is of great height, as between Malabar and Coimbatore, the rain clouds are almost entirely diverted from the districts immediately below the mountains on the eastern side; and while the annual rainfall on the western side may be one hundered and fifty inches, not more than twenty inches are usually registered on the eastern side, immediately within the influence of the mountain ranges. Where the mountain chain is of lower elevation, the rain clouds pass over the hills, and rain is precipitated in uncertain and varying amount over the peninsula to the east of the ghâts; but, except in the northern districts, where the rainy season approximates to that of Bengal, the heaviest rainfall of the southern portion of the eastern division of the peninsula occurs during the period of the north-east monsoon. During the continuance of this monsoon, the western ranges of mountains have a similar effect in arresting the rain clouds, so that at the season of the year when the Carnatic is visited by heavy rain, the western coast districts enjoy clear weather. The climate thus varies considerably in the different parts of the Presidency. The Nílgiri Hills enjoy the climate of the temperate zone, with a moderate rainfall, and a temperature rarely exceeding 80° F., and sometimes falling to freezing-point. On the Malabar coast, the south-west monsoon brings an excessive rainfall, reaching 150 inches in the year at certain places. The rain clouds hanging on the slope of the Western Ghâts sometimes obscure the sun for months at a time. Along the eastern coast and on the central tablelands the rainfall is comparatively low, but the heat of the summer months is excessive. At Masulipatam the thermometer frequently rises to above 110° F. in the shade, and to 170° in the sun. Observations extending over a period of eighty-five years give an average of 49·03 inches of rain in the year at Madras city; but this is considerably above the mean of the east coast generally. At Bellary the average annual rainfall does not exceed 22 inches, of which 16 inches are brought by the south-west monsoon across the ghâts. The whole coast of the Bay of Bengal is liable to disastrous cyclones, which not only wreck the shipping in the roads, but have repeatedly overwhelmed the low-lying ports.

Productions.

6. To the physical barrier of the Western Ghâts must be attributed not only the vast differences of climate, but also those of the nature of the productions, in the eastern and western divisions of the peninsula. In the former division the uncertainty and capricious character of the rainfall has taught the cultivators of the soil the necessity of making provision for the storage of water for irrigation purposes, and innumerable tanks or reservoirs scattered throughout the country are the result. On the western side of the mountains, however, the necessity for such works has never arisen. There the periodical rains fall with great regularity as to time and quantity, and the earth produces so abundantly that, although in certain exceptional years there may be partial failures of crops, absolute agricultural distress as a result of bad seasons is quite unknown. Only three of the twenty-one mufassal districts of the Madras Presidency lie within the influence of the never-failing rains of the south-west monsoon. In the remaining eighteen districts nature demands the assistance of art in the collection, storage, and distribution of the rain-supply. In some of these eighteen districts however, as in the northern coast area, the periodical rains fall more regularly than in others,

thus giving them an advantage. In several of these also the rivers running eastward, swollen by the south-west monsoon rains, form an additional source of irrigation. The chief staples of the Presidency are rice, cholam (a kind of maize), cumbu (a kind of millet), rági and varagu amongst food-grains; gingelly amongst oil-seeds; and chillies, tobacco, sugar-cane, plantains and betel-leaf amongst garden crops. Cotton, which may be regarded as a special crop, has a cultivation almost equalling that of rági. The trees most grown for their fruits are cocoa-nut, areca-nut, jack, tamarind and mango. Rice is produced in the largest quantities in the alluvial and highly-irrigated districts of Tanjore, Gódávari, and Kistna on the east coast, and in Malabar and South Canara on the west coast, where the rainfall is abundant. Cholam is principally cultivated in Coimbatore and in the tableland districts of Bellary and Kurnool, while cumbu and rági are most extensively grown in the other inland, but less elevated, districts, such as Salem and Coimbatore. Cocoanut palms flourish most luxuriantly on the banks of the estuaries and backwaters or salt-water lagoons of the western districts of Malabar and Canara, and areca-nut palms in the valleys intersecting the lower slopes of the Western Ghâts.

The West Coast.

7. When the Konkan territories in Bombay are left behind to the north, all that ever constituted part of the Mughal empire, or at least was regularly apportioned among its provinces, has been quitted. The south of India may be said to reach from this point to Cape Comorin, and to begin with the maritime tract of Malabar. The name of Malabar properly belongs to a kingdom, of which the capital, Calicut, was found by the first Portuguese navigators to be the seat of a considerable dominion under a sovereign called the Zamorin. Under a misconception of the extent of the country the name Malabar was extended to neighbouring countries, and has even been applied loosely to all the western coast of the peninsula as far as the Gulf of Cambay. Considered as the coast reaching from the Konkan to Cape Comorin, it forms a region 500 miles in length, 30 or 40 in breadth, interposed between the Indian Ocean and the almost continuous chain of the Western Ghâts. This position supplies it with copious moisture. Its surface, rugged, rocky and irregular, may be rendered highly productive with careful cultivation, which is generally bestowed. It yields very large crops of rice, forming an article of export to Bombay and the northern coasts. But the ancient staple of its European commerce is pepper, produced in greater abundance and perfection than in any other part of the globe. It produces also very copiously the noted Indian luxury, the betel-leaf and areca-nut; likewise ginger, cardamoms, and several other spices. Coffee now forms an important export to European countries. The upper districts abound with fine timber, particularly teak, so pre-eminently valuable for ship-building; also sandal, sapan, and other dyeing and ornamental woods. The region does not contain any fine or flourishing manufactures, unless the modern industry in machine-made earthen tiles be reckoned as such; but with its grain, timber and spices purchases the fine cottons of Gujarát. Social life throughout Malabar presents a very remarkable aspect. The original structure of Hindu society has not been altered by foreign conquests, but it exhibits within itself some forms decidedly in contrast with those which are found elsewhere. The distinctions of caste are carried to an unusual pitch. Before the enforcement of English law, if a cultivator (Tiyyan) or fisherman (Mukkava) touched one of the Náyars or Military class, the Náyar was considered justified in killing the person so touching him on the spot. The Paraiya class in Malabar were till lately little less than slaves. A class called Nayádis are excluded from all human intercourse, and forced to wander in unfrequented places, without means of support, except the alms of passengers. The Náyars themselves are a remarkable body. In the Hindu system they are classed as Súdras, though they rank immediately under the Bráhmans, the intermediate classes being here wanting. Their most peculiar characteristic consists in their customs with regard to females. These are married at ten years of age, and have an aliment transmitted to them by their husband, whom they must not however see or hold intercourse with; a single instance of such connection would be considered scandalous. They reside with their mother, and after her death with their brother; and they are allowed, and regard it an honour, to attract as many lovers as possible, provided they be of equal or superior rank. It is thus considered a ridiculous question to ask a Náyar who is his father. The only real guardianship rests with the brother of the woman, whose children are considered as belonging

to him, and to whom all his property and titles are transmitted; for the sister's children must be consanguineous in one degree. Another striking peculiarity on the Malabar coast consists in the early colonies of Christians and Jews, which still form a considerable part of its population. So numerous are the former, as to give Malabar in many quarters the appearance of a Christian country.* They derive from a very well-known tradition the title of Christians of St. Thomas; their origin does not in reality appear to be much later than the apostolic age. Their original form of worship was not in accordance with the tenets of the Catholic church. The Portuguese, who at an early period became masters of this coast, considering such worship as heresy, compelled them to conform. The Malabar Christians could not, however, be induced to hear the service read in Latin; the Portuguese therefore conceded this point, and allowed the use of the Syriac. A species of Syro-Roman church was thus formed. The Jews of Malabar are divided into 'white' and 'black,' forming quite distinct classes; the white consider the other as comparatively low and impure. In A.D. 490 they obtained the gift of the city of Kranganúr; but, having incurred the hostility of a neighbouring rájá, this settlement was broken up and dispersed. The black Jews have been supposed by some to be Hindu converts; but it is possible that they were an earlier race of Jews from Palestine. Both tribes possess Hebrew manuscripts of the Old Testament, which appear to be preserved in a state of tolerable purity.

South Canara.

8. In surveying this coast in somewhat greater detail, the first tract met is Canara, which extends along the sea about 200 miles. The northern part, now in the Bombay territory, is very hilly, and produces chiefly teakwood; but the southern, a portion of which is called by the natives Tuluva, is well cultivated and exports large quantities of rice. Hindus of the peculiar sect called the Jains are found in considerable numbers in this country. There are also a considerable number of Christians; but the sea-coast is mostly occupied by a class of Muhammadans called Máppillas, apparently emigrants from Arabia. Through their means Haidar and Típú were complete masters of Canara, and the latter carried on a violent persecution against the professors of all other religions. After the fall of Típú however in 1799, Canara was annexed to the British dominions and toleration was restored. South Canara alone now belongs to this Presidency. The principal city of South Canara is Mangalore, long a flourishing emporium. It suffered in the war between the Mysore sovereigns and the British Government. Being taken by the British in 1733, it was defended with extraordinary valour against the whole force of Típú. In the following year it was surrendered by treaty to that ruler, who then dismantled the fortifications. Since coming under British dominion Mangalore has flourished, and carries on a very large export of rice. It is situated on a back-water forming a common estuary to two rivers, one of which is to its north and the other to its south. The port will not admit vessels drawing more than ten feet of water; but the anchorage at the mouth of the river is good.

Malabar.

9. Proceeding southwards, the next district is that of Malabar proper, which occupies about 200 miles of coast, and contains upwards of 2,700,000 inhabitants. The soil immediately along the shore is poor and sandy; but in the interior it consists of hills, the sides of which are formed into terraces, with fertile valleys interposed. Pepper, abundantly raised in the hill-forests of this country, forms the staple of a very extensive foreign trade. Calicut, which first gave to Da Gama an idea of the splendour of Indian cities, was the residence of the Zamorin, whose empire then extended wide along Malabar. Its power was materially broken by unsuccessful contests with the Portuguese, and towards the close of the last century was finally destroyed by the invasions of Haidar and Típú. In the struggle which terminated in the downfall of the latter, Britain derived some aid from the native chiefs, who in return, were invested with the internal jurisdiction of the country subject to the payment of a regular tribute. Between powers placed in so delicate a relation dissensions soon arose; the conflict terminated in favour of the British, who assumed the uncontrolled dominion of the country, its territory being annexed to this Presidency. The Zamorin is now a stipendiary of the Madras Government. Calicut, the once important capital of Malabar, was entirely destroyed by Típú; but, as soon as British ascendency permitted, the inhabitants animated by that local attachment which is strong in India hastened to return.

* According to the latest figures, the Christians in Malabar district number 51,493, while the other west coast divisions are populated as follows :—South Canara (84,103), Cochin (198,239) and Travancore (526,911).

It is now a large place with an improving trade. The most remarkable modern city, however, has been Cannanore, formerly the seat of a female ruler called the Bíbí, and from its almost impregnable position regarded as the main hold of the Máppillas or Muhammadans of Malabar. The Bíbí was till lately allowed to administer Cannanore and the country in its immediate vicinity. She carried on also considerable mercantile transactions with Bengal and Arabia, and included in her sovereignty part of the Laccadives, an archipelago of low coral islets, facing the coast of Malabar at the distance of from 75 to 150 miles. They, however, produce nothing but coir, yarn and plantains, and are inhabited by poor Máppilla fishermen.

Cochin.

10. South of Malabar proper is the small territory of Cochin, which presents the same general aspect as the rest of the coast, and particularly abounds in teak timber. Christian colonies are very numerous in this territory. Cochin, the capital, was the first point at which the Portuguese were allowed to erect a fort. In 1663 it was taken by the Dutch, and was rendered by them one of the most flourishing cities of India. The rájá has maintained his independence better than most Hindu princes. He was merely tributary to Típú, and has been allowed by the English to carry on the internal affairs of his State, though under payment of tribute. Cochin still enjoys a considerable trade. Ten miles to the north is Kranganúr, which the Portuguese have made the seat of a Bishop's see.

Travancore.

11. The extended line of coast from Cochin to Cape Comorin is occupied by the dominions of the Mahárája of Travancore. They possess all the advantages peculiar to the Malabar Coast. The inland districts, in particular, are remarkable for fertility and beauty. They exhibit a varied scene, consisting of hills clothed with lofty forests, and of winding streams with valleys clad in perpetual verdure. The woods are perfumed with numberless aromatic plants. Besides the staple article of pepper, Travancore yields ginger, turmeric and inferior species of nutmeg and cinnamon. The Travancore Mahárája, like the Cochin Rájá, conducts the internal affairs of his dominions, subject to the advice of the British representative under a treaty of 1805. Travancore, the ancient capital, was situated somewhat up the country in a soil of white sand; but it is much decayed since the Mahárája removed to Padmanábhapuram and subsequently to a new palace built on the European model at Trivandrum. Alleppi, Quilon and Koláchel afford convenient havens for trade, though the strong currents which run along the coast render navigation difficult.

12. At the extreme point of the territory of Travancore is situated Cape Comorin, the most southern point of India. A few miles from this stands the southernmost scarp of the Western Ghâts, a bold and commanding feature, which presents to the ocean a lofty hill covered with the most brilliant verdure. The rocks scattered along the shore of the cape render it necessary for the navigator to keep at a distance.

The Carnatic.

13. After turning Cape Comorin the extensive territory is reached to which Europeans have given the name of Carnatic. It stretches about 500 miles along the coast, stopping somewhat short of the great natural boundary of the Kistna. It is divided into two parts by the chain of the Eastern Ghâts, running like the Western parallel to the coast. One of these divisions is called the Carnatic above and the other the Carnatic below the ghâts; but the former is better known under the title of Mysore, and the territory on the coast will be here considered as the proper Carnatic. It is called also the coast of Coromandel; and, though in its general structure similar to Malabar, presents some marked differences. The mountains are distant from the sea fifty, seventy, or a hundred miles; and, instead of being clothed with vast and majestic woods, are in most places naked and rocky. The region is watered by several great rivers, rising in the Western Ghâts, and running across the whole peninsula; among which the Cauvery stands pre-eminent. Upon the whole, however, instead of numberless torrents dashing down the sides of the hills, and requiring only to be confined and guided, this tract contains large arid plains, to which the industrious husbandman can with difficulty by canals and tanks convey the necessary moisture. The ghâts also from their great altitude intercept the heavy rains which the monsoon brings on the western coast; and there are only occasional showers, from May to June, to fertilize the ground and cool the intensity of the heat. Hence the Carnatic, in seasons of drought, is subject to severer famines than any other part of India. Yet, though there are many

barren tracts, the country, on the whole, is highly cultivated and very productive. The population of the Carnatic is essentially Hindu. The tide of Muhammadan conquest did not reach it before the fourteenth century; nor was the subjection nearly complete until the reign of Aurangzeb. A race of Mughal viceroys was then established at Arcot, who on the fall of the empire set up an independent power. Pressed however by the overwhelming force of the Rájás of Mysore, they were forced to ask for British aid. The Company readily interposed, and after a long and severe struggle subverted the throne of Haidar and Típú. The Nawáb, however, was unable to maintain his position. On the death of the reigning Nawáb in 1801, his successor was made to sign a treaty by which the sovereignty of all his territories was transferred to the Company: and there were reserved to himself only from two to three lakhs of pagodas, and a portion of household lands. The country was then divided into eight districts or collectorates administered by British officers. Arcot and its immediate vicinity is largely peopled by Musalmáns. The rest of the population is Hindu, and the customs and religion of this native race have been preserved here in unusual purity. The pagodas are extremely numerous, and rival in splendour those of the sacred cities of Benares and Allahábád. The Bráhmans, not generally oppressed as elsewhere under Muhammadan ascendency, had entrusted to them by that government most of the civil employments connected with the management of the revenue in the state. Another class, almost peculiar to the southern part of the country, was formerly that of the 'pálegárs', originally district officers of the old Náyak Government. They took advantage of the periods of its weakness, and erected castles from which like the baronial chiefs of Europe in the feudal ages they plundered and oppressed the surrounding country. The English Government were often obliged to purchase their orderly behaviour by giving them an independent power and jurisdiction. There is no class whose subjection proved so expensive to Great Britain. The Carnatic is much more of a manufacturing country than Malabar; yet it does not produce those fine fabrics which distinguish the Northern Circars. Piece-goods, blue cloths, chintzes, &c., all of a coarser kind, are its principal products.

The City of Madras.

14. A detailed survey of the Carnatic may begin with Madras, now its capital, and that of the British possessions on the eastern coast. The choice of a capital, as in many other countries, has not been so happy as that made by the French; Pondicherry being in every way a naturally finer and more convenient station. Madras has had till recently no harbour, but a mere roadstead through which runs a strong current, and which is often exposed to dangerous winds. On the beach breaks so strong and continual a surf, that only a peculiar species of large light boats, the thin planks of which are sewed together with the tough grass of the country, can by the dexterous management of the natives be rowed across it. For minor communications with the shipping and for deep sea-fishing the natives of the coast employ what is called a catamaran, consisting merely of two or three planks fastened together, with which they encounter the roughest seas with wonderful address, regaining it by swimming when swept off by the waves. Fort St. George, placed at a small distance from the sea, was once regarded as a strong and handsome fortress, though not on so great a scale as Fort William at Calcutta; but more advantageously situated however, and defensible by a smaller number of men. European Madras is for the most part an assemblage of country houses situated in the midst of gardens and scattered over an extent of several miles. The houses are light and elegant, having columns covered with the fine composition of shell limestone called chunam. The hand of art has covered with verdure a somewhat arid soil. The Black Town is extensive, and its minarets and pagodas, mixed with trees and gardens, are striking from a distance; but the interior is poor.

Chingleput.

15. In the vicinity of Madras is the district of Chingleput, originally obtained as a jágír from the Mughal, and still kept up as a distinct collectorship. Though the soil is generally dry, it is made by industry to yield tolerable crops of rice. The town of Chingleput is somewhat inland and not of much importance though it is the head-quarters of a judge. About thirty-five miles to the south of Madras is Mahábalipur, or the city of the Great Bali, called also the Seven Pagodas. It consists of a range of sculptured edifices representing the exploits of Bali, Krishna, and other chiefs celebrated in the Mahábhárata. It is sacred to Vishnu, a colossal image of whom is found in the principal temple. The monuments, though not

on the same gigantic scale as in some other parts of India, are well executed. In the interior of the country is the hill temple of Tirupati, one of the most crowded scenes of Hindu pilgrimage.

Pondicherry.

16. Proceeding southwards Pondicherry is reached, the seat of French Empire in India. This empire, founded in 1749 by M. Dupleix, presented for some time a brilliant aspect, and seconded by native alliances threatened to subvert the foundations of the British power in the East. Towards the close of the war of 1756 Pondicherry fell into the hands of the British; and, though restored by subsequent treaties, never on the renewal of war made any effectual resistance. Pondicherry was raised by the French from a village to be the handsomest European city in India. It contains many fine houses in the European style; and the high culture of the vicinity, the numerous canals crossed by neatly constructed bridges, the roads planted with trees and partly adorned by statues, give to the surrounding district the appearance of a great garden. The inhabitants have suffered much by repeated hostilities, and being unfavourably situated for trade have been unable entirely to retrieve their affairs. In trade Pondicherry was at one time surpassed by Cuddalore, a well-built town at the mouth of a considerable river. In war Cuddalore has followed the fortunes of Pondicherry, though its capture in 1783 was not effected without very great loss on the part of the British.

Tanjore.

17. The Kingdom of Tanjore was formerly an important territory, consisting of the delta of the Cauvery. The Hindus attach to its stream a peculiarly sacred character. At Trichinopoly, about 100 miles above the sea, it separates into two great branches, one retaining the original name and another called Coleroon. Numerous channels derived from these convert the region into a delta, not surpassed by any part of Egypt or Bengal in culture and fertility. Art has been industriously employed to improve these natural advantages. The chief produce consists of rice, grain and cocoanuts, which are largely exported. The population introduced by Mughal conquest has never reached Tanjore, and almost the only Muhammadans consist of a few refugees from Arabia. This country therefore has retained almost entire the ancient religion, constitution and manners of India. It is particularly distinguished by the splendour of its pagodas and other edifices destined to religious worship. Tanjore was governed by an independent rájá until 1799, when the British caused him to resign the administration, accepting a revenue of a lakh of pagodas, or $3\frac{1}{2}$ lakhs of rupees, with one-fifth of the net revenue of the country. He was also permitted, in time of peace only, to keep possession of the town and fortress of Tanjore. The town of Tanjore is of great antiquity, but since the death of the last rájá, its splendour has waned. Its pagoda, rising from the ground by twelve successive stages, is greatly celebrated and is considered the finest specimen of that species of structure existing in India. The place is six miles in circumference, and contains two large and strong forts, the smallest of which is about a mile in circumference, surrounded with a broad and deep ditch, cut in the solid rock. In one of these forts is the pagoda, and in the other the palace of the rájá.

Trichinopoly.

18. Trichinopoly is a large and strong city, farther up the Cauvery, and distinguished by being the residence of Muhammad Alí and his son, who under British protection reigned over the Carnatic. The siege of Trichinopoly in 1755 is celebrated in Indian history for the gallant defence made by British officers against the French and their native allies, which terminated in a great part of the former being obliged to surrender. Opposite to Trichinopoly is the large island of Srírangam formed by the two branches of the river. It contains a pagoda pre-eminent in magnitude and sanctity, being about four miles in circumference, and surrounded by seven successive enclosures. The innermost shrine has never been violated by any hostile power. It is visited by crowds of penitents from all parts of Hindustán, who bestow gifts in return for the pardon of their sins.

19. Among the sea-ports of this region special mention may be made of Negapatam at the mouth of the Cauvery, once the chief factory of the Dutch on this coast, and made by them a strong and commercial place, and now one of the important ports on the east coast. At the mouth of one of the deltaic branches is Tranquebar, which the prudent conduct of the Danish Government converted from a small village to a thriving mart of trade. It is also the seat of an active mission, to which the public is indebted for some important memoirs relative to India.

Dévakóttai, at the mouth of the Coleroon, was once a considerable British factory, and the first place in this neighbourhood where the British obtained a footing.

Madura and Tinnevelly.

20. The districts of Madura and Tinnevelly, added to Travancore on the opposite coast, constitute the extreme south of India. They are inferior to Tanjore in natural fertility, and, as some consider, in cultivation. They are less copiously watered, and a not inconsiderable part of their surface is still covered with jungle, formerly the retreat of pálegárs, whose incursions disturbed the pursuits of industry. Cotton forms the staple product, particularly of Tinnevelly; and a considerable quantity of coarse manufactures is transmitted to Madras. In the situation and structure of Madura and Trichinopoly strength was mainly studied; but since the country has attained a more settled state, their fortifications have fallen into decay. Madura is a very ancient city, which is regarded by the Hindus as peculiarly sacred. It has a pagoda or temple much more than commensurate to the greatness of the city, and one of the most splendid in Southern India. Its population is now exceeded by no town in the Presidency, except Madras.

Northern Carnatic.

21. The northern part of the Carnatic still remains to be mentioned. It is generally inferior to the southern, and yields no remarkable product, either of land or manufacture. Arcot, nearly in a direct line inland from Madras, was raised to high importance by the Mughal government, who, attracted by its salubrity, made it their capital. It is situated however in a barren country, and is surrounded by naked granite hills. Pulicat, close to the sea and with a port, after enjoying for a long time high prosperity as the chief seat of Dutch commerce on the Coromandel coast under the name of Geldria, has since it came under the power of the British declined to the position of an inconsiderable village. There was formerly trade here with Penang. Nellore on the large river Pennér formerly exported blue chintzes for the use of the negroes on West Indian plantations, but this trade has ceased. There is an anicut across the river close to the town, which has supplied the delta south of the river with irrigation for many years; and there is another anicut constructed at Sangam, 20 miles west of Nellore, performs the same service for the delta north of the river. The whole of this coast is engaged in the salt industry. The district of Nellore has been opened out by rail-road communications, the North-East line of the Madras Railway having been completed in the last decade. Mica-mining in Nellore district has developed in recent years.

Salem, Coimbatore and the Nilgiris.

22. Salem district includes a northern and eastern portion once called the Bárámahál or twelve estates, and a remainder consisting of country lying on and lying below the Mysore plateau. The East India Company sought to convert the town of Salem into a manufacturing centre, and a large weaving industry remains to this day. The climate of Salem town is not considered healthy, being liable to sudden alternations of heat and cold ranging up to 25°. This district was the principal seat of the manufacture of Indian steel or wootz. The ore is exposed and needs no mining. The antiquity of the process of manufacture is no less astonishing than its ingenuity, for its theory is extremely erudite, and in its discovery there seems but little room for the agency of chance. There is no evidence that any nation of antiquity except the Hindus were acquainted with the art of manufacturing steel. The forests of the district cover a fourth of its area, and their development for the purposes of fuel may make this into an iron-producing country. Above the town of Salem tower the Shevaroy Hills. The name of the old Konga kingdom, which disappeared from history eight or nine centuries before the Christian era, survives in Kángayam in the adjoining Coimbatore district. The fauna of Southern India abound in this part of the country. The town of Coimbatore lies high and is a favourite station with Europeans. On the western confines of this district lie the Nílgiri Hills, the largest hill-plateau in India that has been permanently occupied by Europeans. There are several tea and coffee plantations in the Nílgiris and cinchona, eucalyptus and blue-gum trees are grown there.

The Northern Circars.

23. The old province of Orissa to the east of Gondwána in the Central Indian tableland occupied the whole sea-coast of the southern peninsula from the Carnatic to Bengal. The interior of the country, traversed by a portion of the great chain of the ghâts, is still more rugged than the tableland to the west of it; it is covered with jungle and infested by hill fever. Various rude tribes have from time immemorial inhabited these wild recesses. They rendered themselves formidable to the Márathás; but the influence of British law has converted

them into more or less peaceable subjects. The three great rivers, the Mahanadí, Gódávari and Kistna discharge themselves into the sea; the first towards the northern, and the two latter at the southern extremity of this country. The tract, which has been known as the Circars, and which is the only part of Orissa now assigned to Madras, comprises that southern portion of it, which was never securely held by the original Hindu kingdom. The littoral of the Northern Circars is one of the most valuable districts in Hindustán, equal to the Carnatic in fertility, and formerly at least superior to it in manufacturing industry. It is remarkable also as being the first territory of any considerable extent which came under the dominion of the East India Company. The French in 1759 having been driven from Masulipatam, Lord Clive obtained from the Mughal the grant of the territory; and the Nizám, though then in actual possession, was not in a position to dispute the transaction. The internal government has not been materially altered, the villages being ruled according to their ancient institutions; but the power of the zámíndars, the principal of whom at the first occupation could assemble 41,000 troops, has been greatly broken. Calicoes and chintzes were once the staple manufacture, the finest being produced in the delta of the Gódávari. These manufactures were exported to Europe and various parts of the East, but particularly to Persia, where the demand for them was most extensive. Modern competition however on the part of Bombay and England has gone far to destroy the industries. The principal exports now are in natural products. Manganese mines in Vizagapatam district have been recently developed; graphite is found in Gódávari district. The Circars were under the Musalmán government five in number: Guntúr or Murtazánagar, Kondapalle or Mustafánagar, Ellore, Rajahmundry and Chicacole; with the coast strip of Masulipatam added. But this nomenclature has been altered by the modern distribution of revenue districts. The important trade of this tract used to centre almost entirely in Masulipatam, a large sea-port with the best harbour in the whole coast from Cape Comorin. More than half of its exports were to Bussora, the rest chiefly to Madras, which it supplied with a considerable quantity of grain. This place, however, has in its turn lost its natural advantages, and has been replaced by Cocanada, which has canal communication with the deltas of the Gódávari and Kistna rivers.

The Ceded Districts.

24. The Ceded Districts will complete the account of the Presidency. They form the Bálághát or highlands of the old Hindu Vijayanagar kingdom, as opposed to the Payan Ghát or Talaghát or lowlands of the same, already described above under the title of Carnatic. In the concluding years of the eighteenth century French alternated with English troops in the support of the Nizám at his capital. But in 1798 the Earl of Mornington finally established there a British force, and in 1800 at the conclusion of the third Mysore war the most southerly of the Nizám's territories lying below the Tungabhadra river were ceded to the British as payment for that force then largely increased. Thus a large tract of country was added to the British possessions in the south, which carried their power from the coast to the centre of the peninsula. The native State of Mysore was at the same time encircled. The character of this country does not differ materially from that of the Deccan plateau. Bellary the most westerly of the provinces, and including at that time what are now Anantapur and Kurnool districts, is throughout a highland; the most elevated part being to the west where the surface rises towards the culminating range of the Western Ghats, and to the south where it rises to the tableland of Mysore. Towards the centre of the country the plateau presents a monotonous and almost treeless extent. Water is scarce, and fodder difficult to be procured. The present district of Kurnool lies to the east of Bellary. The central portion consists of a valley of black-cotton soil. Anantapur south-east of Bellary was once the western limit of the real Canarese country. The Cuddapah District is the fourth division of the Ceded Districts, and its most mountainous part. The town of Cuddapah is situated in a depression, and the northern part of the district is much lower than the southern. The climate of the principal town itself is marked during the hot season by great heat during the day and oppressive closeness and stagnation of air during the night.

POLITICAL.

HISTORICAL SUMMARY.

Introduction.

25. In any enumeration which may be made of the literature proper to this country, one capital defect must be obvious, that history finds in it no place. The legends of Indian mythology may be plausibly supposed to have a foundation in the story of some celebrated early kings or conquerors, but it is scarcely possible through the mist of fable even to conjecture anything respecting the real existence of these personages or the events connected with them. The Grecian Iliad and Odyssey are in comparison with Hindu legends plain and authentic chronicles. Indian chronology, like that of the Greeks, is divided into four ages, of which three are fabulous, and the first consists of nearly 2,000,000 years.

Antiquarian research is only by degrees finding means of supplementing the deficiency caused by the absence of materials constructed or collected by usual historic methods.

Periods preceding known Dravidian dynasties.

26. The history proper of the south of India may be held to begin with the Hindu dynasties formed by a more or less intimate mixture of the Aryan and Dravidian systems of government. But, prior to that, three stages of historical knowledge are recognizable; first as to such aboriginal period as there may have been prior to the Dravidian, secondly as to the Dravidian period proper, and thirdly as to the period when the Aryans had begun to impose their religion and customs upon the Dravidians.

Aborigines.

27. Human remains and traces have been found on the East Coast of an age which is indeterminate but apparently beyond the ordinary calculations of history. They are material here in so far as they are connected with the question whether there was or was not a population of Southern India earlier than the Dravidian. All enquiries connected with populations show the impossibility of assuming any anterior limit in such series. At the same time there is for practical purposes no evidence of any earlier population in the present instance. In this part of the world, as in others, antiquarian remains show the existence of peoples who used successively implements of unwrought stone, of wrought stone, and of metal fashioned in the most primitive manner. These tribes have also left cairns and stone circles indicating burial-places. It has been usual to set these down as earlier than Dravidian. But the hill Kurumbas of the Palmanér plateau, who are only a detached portion of the oldest known Tamilian population, erect dolmens to this day. The sepulchral urns of Tinnevelly may be earlier than Dravidian, or they may be Dravidian. It has been alleged that the Kolarian races of the north-eastern part of the peninsula, whom various considerations show to be in a measure more primitive than the Dravidian races, preceded them in Southern India. This is not demonstrable. According to some theories the wild tribes of Southern India itself are physiologically of an earlier type than the Dravidian tribes. The evidence of the grammatical structure of language is to be relied on as a clearly distinctive mark of a population, but from this point of view it appears that there are more signs of the great lapse of time than of previous populations. The grammar of the south of India is Dravidian. The hill, forest, and paraiya tribes use the Dravidian forms of grammar and inflection. The vocabulary alone of the rude dialects may yet be found to give traces of ancient pre-Dravidian languages. The worship of serpents, and that mysterious form of combined worship addressed to trees and serpents together, pertains perhaps rather to Mongolian races than to the Dravidian races proper. It has undoubtedly prevailed in Southern India, and, if this has been so generally and not sporadically, it is an argument for the existence of populations prior to the Dravidian. The worship of serpents, living and in effigy, still survives. The habits and customs of the people exhibit that most remarkable breach between one section of the population and another which is expressed by the terms "Hindu" and "out-caste." This may be a religious or caste distinction effected by Bráhmanical influence. It may indicate an essential difference of race. The social breach is so wide as to furnish the strongest argument that exists for regarding certain tribes

as earlier than the Dravidian in their origin. Polyandry, the most noticeable social peculiarity of Southern India, belongs as much to the Dravidians as to any other race. As regards native chronology it need only be said that the local traditions of the oldest portion of Chera Mandalam or south Travancore make the Dravidian dynasty of that country coeval with the origin of the world. The arguments have been stated for considering that there was a population earlier than, and distinct from, the Dravidians. It will be seen that history is almost silent on the subject.

Dravidians.

28. The theory that the Dravidians came to India from without, passing over the north-west boundary and through Scinde, does not rest on certain evidence. This movement appears to have been the characteristic of much later races. If the Dravidians moved into India at all, they may have migrated from the south or the east. As far as present evidence goes however they are indigenous to India, and perhaps specially indigenous to Southern India. The Dravidian terms indicating direction, which must be very primitive, are derived from the configuration of the southern peninsula. The east is இழக்கு (kizhakku) or "down," and the west is மேற்கு (merku) or "up"; that is to say the country sloping to the coast and the country rising to the Western Ghâts. The Dravidians may have been at first nomads in India. Numerous local traditions testify to minor migrations. The Greeks knew one small section of the race as σῶραι νομάδες still in their own day. The original strength of the language of the Dravidians is shown by the great persistence of its grammatical formations through all the vicissitudes of history. The early Dravidians perhaps had for religion a worship of the spirits of ancestors, coupled with that of hostile demoniac personages of other and various descriptions. When religious observances developed they appear to have taken the form of the sacrifice of living animals, and the peculiar rites of devil-priests. The fishermen of the south, dependent on the moon's phases for their operations, early developed a primitive lunar computation of time. The agriculturists of the plains observed the seasons and the movements of the sun. The astronomy of the Dravidians thence arising was first lunar and then strictly solar-sidereal. The vocabulary and institutions of the people show that they had a highly developed practical astronomy before they were touched by Bráhmanical influences, and their system still holds its ground in many respects. The Jovian cycle of five revolutions of Jupiter or sixty years, which regulates the chronology of the Tamilians, is no part of the Aryan system. The familiar period of twelve years for domestic events among the Tamils has the same derivation, and is similarly independent. The religious festivals which are proper to the Tamilians can be called fixed, varying only with the fluctuations between diurnal and solar time, and differing from the Hindu festivals which vary extensively under the lunar-sidereal system of the Indian Aryans. The Dravidians knew all the ordinary metals indigenous to the country. Spinning, weaving and dyeing were common arts. The Dravidians possessed considerable constructive, if not architectural, power. The Amáravati Stúpa and the rockcut temples at Mahábalipur may have been produced in later ages under Bráhmanical or Buddhist influence, but they are a development of strictly indigenous art.

Aryans.

29. The date of the first settlement of the Aryans in Southern India is more obscure than that of the first arrival of Aryans in India. As far as is actually known from direct evidence the first Aryans who settled permanently in the south were hermits, who by civilizing the people round about them gradually opened a pathway for more effectual invasions. The most prominent name among these ascetics is that of Agastya, who is celebrated for the influence he acquired at the court of Kulasekhara, according to tradition an early Pándyan king. He is called the Tamizh Muni, or Tamilian sage. The mountain from which the Parni or Sanskrit Támraparni takes its rise is still known as Agastya's hill. The Aryans abandoned their own language in Southern India in favor of the Dravidian languages, and at the outset at any rate modified to a great extent their own religion and customs. In Coorg there is no Bráhman influence even to the present day. The ascendency of the Bráhmans was brought about gradually and by the arts of peace; for if it had been effected by warlike means some traditions of the fact would have survived. There are however none such, and all existing traditions, and the names by which the Bráhmanical race is distinguished in Tamil, viz., ஐயர் (ayyar) or 'fathers' and பார்ப்பார் (párppár) or 'overseers,' seem to point to power gained by means of administrative ability, rather than by violence.

Dravidian dynasties.

30. The occupants of the south of India were, at the earliest period for which any records archæological or otherwise can be found, Dravidians, ruled over by kings taken from the same stock as themselves. They were however, to an extent which cannot be determined, under the influence of Aryan settlers. It is almost certain that the only representatives of the Aryans were Bráhmans. These were probably located in the larger towns alone and came little into contact with the agricultural population. The Sanskrit names given to places existed probably in the Sanskrit writings only of the settlers. And the same may be said without hesitation for the Sanskrit names given to the Dravidian rulers, and derived for the most part from the Solar, Lunar, and Agnikula families of the north. The tribes and dynasties of the Dravidians were extremely numerous. The Tamil country in the extreme south, to which the name of Dravida is alone strictly applicable, is traditionally divided between the three principal kingdoms or mandalams of Pándya, Chola and Chera. The west coast developed an independence. On the north-east, the kings of Kalinga at one time ruled over the entire line of seaboard from the Kistna to the Ganges. The eastern coast was occupied by a Pallava kingdom, which was perhaps almost as ancient as the southern kingdoms. But to these principal kingdoms might be added a great number of smaller kingdoms. The inhabitants of the three mandalams spoke the ancient Tamil language, and employed a written character known now by the name of Vattezhuttu; the origin of this is doubtful. The most celebrated ancient Tamil literary works, as the Tolkáppiyam and the Kurral, were written in this character. The West Coast nations spoke Malayálam, the North-East Coast nations spoke Telugu, and the inhabitants of the South Deccan spoke Kanarese. These are forms of the Dravidian language later than Tamil.

The Pándya kingdom.

31. The Pándya kingdom as called by the Sanskrit writers, or the Pándi kingdom as called by the natives of the country, was the most prominent dynasty in the extreme south when the Aryans first made acquaintance with it. It is mentioned by the name 'Páda' in Asoka's inscriptions, which are dated 260 B.C., together with the Cholas under the name of Chodas and the Chera ruler under the name of Keralaputra; but only the names are enumerated. Megasthenes, who was sent in 302 B.C. as ambassador from the court of Seleucus Nicator of Babylon, to *302 B.C.* Chandragupta, king of Pátaliputra, in connection with the affairs of the Indian empire, recorded the existence of a kingdom called *πανδαία* in the extreme south. Strabo in 20 A.D. gives an account of an embassy sent by the Pándyan ruler, probably from the West Coast, to the Emperor Augustus. Golden aurei of that emperor's coinage have been found on the West Coast. Pliny later in A.D. 77 calls *77 A.D.* these people the Pandae, and says that they were the only race in India ruled by women. Speaking of a portion of the West Coast, he states that it was then under the rule of the *βασιλεὺς πανδίων* 'far from his inland emporium at Modoura.' The Periplus of the Erythraean sea about 80 A.D. makes a similar remark, assigning Travancore, south of Alleppi at least, to Pándya. Though the people of this kingdom were called Pándis, the proper title of their ruler was not Pándyan but Máran. According to Tamil literature the boundaries of the Pándya kingdom were as follows. On the north the Pudukkóttai Vellâr falling into the sea south of Point Calimere; on the south Cape Comorin; on the east the sea (that is to say the Gulf of Manár and Palk's Strait); on the west according to some authorities 'the great plain' or "peruveli," according to others the town of Vánnasi, and according to others the great pass or "peruvazhi." The most ancient capital of the Pándya country was Korkai (the *κόλχοι* of the Periplus) at the mouth of the Tambraparni river. Korkai was the seat of government in the time of Vijaya. It was esteemed even by the Greeks several centuries later as the first port in Southern India, and they named from it the *κόλπος κολχικὸς* or Gulf of Manár. As the point where the more modern Aryan and Grecian civilizations each in turn met the ancient Dravidian civilization, it is a place second in interest to none in India. It is now represented in name by an insignificant village five miles from the coast, but excavations in the neighbourhood show the remains of a once extensive area of human habitation. Even when Korkai being left inland owing to the deposits of the Tambraparni river gave place to Káyal, the latter port nearly monopolized the trade between Southern India and China and Arabia. Under the influence of modern coast changes the centre of commerce again shifted, but only slightly more north to Tuticorin. The chief industry of Korkai was probably the pearl-fishery, and its

chief commerce the export of rice; two causes sufficient to collect an important oriental population. The migratory habits of the pearl-oyster have rendered the South Indian fisheries precarious, and the failure of these may have led to the abandonment of the coast as the seat of the Pándyan Government. After Korkai there is some evidence that a place called in Sanskrit Kalyánapuram was made the capital; if so, its site cannot be identified. After this at any rate Madura (*μόδουρα* in the Greek) became the chief city, having been founded possibly about the end of the fourth century B.C. The site of even this city has probably been shifted more than once. Thus old Madura is on the north bank of the Vaigai, and about a mile from the present city which is on the south bank. A few miles to the east are the ruins of another ancient city, Manalúr, which it is supposed was also at one time the capital. For the purposes of the history of the earliest period it is sufficient to state that the Pándyans were constantly at war with the Cholas lying on their north-eastern border, but were usually at peace with their neighbours to the west; facts for which the geography of the country will account. In the early ages of the Christian era again they formed an alliance with the Cholas, which lasted for a while, till hostilities were resumed. The Pándyans retained the old Vattezhuttu written character till a very late period. One of the oldest segments of the Tamil race are the Marava race, who once boasted a dynasty of their own, north of the Vaigai river and interposed between the Pándis and the Cholans in the neighbourhood of the coast. In the earliest times they were tributary to Pándya.

The Chola kingdom.

32. The original meaning of the Tamil name Chola, properly Chozham, is southern. Cholamandalam or the realm of the Cholas is held to be the origin of the term Coromandel applied by foreigners to the peninsular shore of the Bay of Bengal. The word Chola appears in numerous names of places, a familiar example of which is Shoranúr. As above mentioned the Asoka inscriptions speak of the Cholas under the name of Chodas. The Chola kingdom lay to the north-east of the Pándyan kingdom. The capital was first Oraiyúr, secondly Kumbakónam, thirdly a place called Gangaikandapuram, near the present Trichinopoly, and finally Tanjore. All tradition points to the Chola kingdom as being of the same age as the Pándyan. The Cholas were constantly at war with the Pándyans and also with Ceylon. Their early history however is almost a complete blank; and there is not even a list of kings, real or imaginary, as there is in the case of the Pandyans. The Cholas first came into prominent historic notice at a much later period, or about the 11th century of the Christian era.

The Chera kingdom.

33. The name Chera like Pándya means, in ancient Tamil, 'toddy or palm juice.' It is the oldest known name for Travancore. This kingdom was before historic times eclipsed to a great extent by others. As above mentioned the Asoka inscriptions speak of the Chera ruler under the name of Keralaputra. Chera is always spoken of in tradition as well as in the written authorities as contemporary with Pándya and Chola. Cheramandalam is by some held to have included the present Mysore, Coimbatore, and Salem, the old Tondainád, and the present South Malabar and Cochin. To the south-east at any rate it was always confined by Pándya and Chola. A tradition places the tri-junctional point of the Pándya, Chola and Chera kingdoms on the banks of the Karaipottánáru, a small river entering the Cauvery eleven miles east of Karúr. Various principal towns assigned to Chera are Karúr, Avanási, Salem, Tirunagari in Tinnevelly, with places on the west coast. Long lists of original Chera kings are preserved. This kingdom however extensive was not according to record at any time belligerent. Its strength was the commerce of the south-western ports. It is related that the Pándyan ruler when invaded by enemies was in the habit of resorting to the king of Chera. South Travancore itself has throughout history preserved an immunity from foreign invasion.

The Kerala kingdom.

34. On the Malabar coast north of Travancore, a part of the country which was early Bráhmanized, the word Chera was converted into Kerala; and this is the form used in Sanskrit for the whole Chera peoples and countries. The boundaries of Kerala are rather indeterminate. In its widest sense, it extended from Gokarna to Cape Comorin. The history of early foreign rule in Malabar is confused, and Chera, Chola, and Pándya may have all exercised sway over different parts of it; or over the whole of it at different times. According to Arrian and Pliny, Malabar was included in the Pándyan kingdom in the early ages of Christianity.

35. Another portion of the old Cheramandalam was the Kongu country. This is not defined by native authority, but comprised approximately the present districts of Coimbatore and Salem. The ancient capital was Skandapuram: perhaps near the present Gejalhatti pass, formerly the highway from Mysore to Trichinopoly. In the third century of the present era the Kongu capital was transferred to Talakád on the Cauvery, and all the south of the Mysore country appears to have been then included. **The Kongu kingdom.**

36. The Pallavas were either the ruling power among the Kurumbas, or superseded them. The first direct mention of them is in the Buddhist records of Ceylon; in which it is stated that a large number of Buddhist ascetics came to Ceylon from the Pallava kingdom in B.C. 157, to attend the inauguration of a stúpa at Anurádhapuram. This people is not mentioned in the Asoka inscriptions, or by the most ancient foreign nations. The Pallavas are identified originally with the basin of the Pálár, the river which disembogues at Sadras. This country was later known as Tondaimandalam, or the country immediately surrounding the present capital of Southern India. Their first known capital was Conjeeveram. They are reputed to have been the constructors of the monolithic raths at Mahábalipur or the Seven Pagodas. They had also a centre at Puzhalúr, near the modern Red Hills, 10 miles north-west of Madras. **The Pallava kingdom.** *157 B.C.*

37. The Kalinga realm may be included among the most ancient. The origin of the term is not known, but the Malays still designate all inhabitants of the Coromandel coast as Klings. The name appears in the modern Calingapatam, Coringa, &c. Kalinga is alluded to in the earliest extant chronicles of India and Ceylon. The oldest Buddhist legends speak of the Kalinga monarchs as rulers of a civilized country. The name ordinarily indicates the country north of the Gódávari and south of Orissa, and running inland as far as the Eastern Ghâts, but has also been used to include Orissa, and even the country as far as the Ganges valley. The country known later as the Vengi country was that portion of Kalinga which lay between the Kistna and Gódávari rivers. Amarávatí, Warangal, Vegi, Calingapatam, Chicacole, and Rajahmundry were at different times principal places within the limits of Kalinga. **The Kalinga kingdom.**

38. The first authentic notice of India is afforded by the invasion of Alexander. The expedition of Seleucus and the embassy of Megasthenes brought to light the existence of an empire of which the capital was Palibothra, on the Ganges. The interposition of the hostile monarchy of the Parthians cut off all land communications between Rome and India, but one embassy from this country reached the court of Augustus, proceeding by sea from the coast of Malabar. The Periplus of the Erythræan sea gives valuable information as to the commerce of Southern India in the first century of the Christian era. **Knowledge of Southern India in the most ancient times by foreigners.**

39. The conquest of India by the Arab dynasty of Ghazní in Afghánistán forms the era at which commences a regular series of Indian history supported by written documents. Mahmúd the Great united all the west of India, with Khorassan and a great part of Tartary, into one empire. His dynasty was subverted by that of Ghori, another Afghán kingdom, and this was followed by a long series of emperors similarly descended, but ruling at Delhi. In 1398 Delhi was taken by the Tartar Tamerlane. A century afterwards Bábar founded again at Delhi the Mughal or Mongolian empire. Along with Afghánistán, it included the whole of Hindustán, and nominally the whole of Southern India. The Muhammadan races first made their influence felt in Southern India and Ceylon many centuries before this period by the establishment of trading emporia on the coasts. On the Malabar coast, Calicut, and in Ceylon, Manár and Mantotte or Mántai were the chief entrepôts of traffic for the Moorish merchants, who received from agents at various ports the produce of different parts of the East. There was even a close connection between the Maldives and the Muhammadan settlements on the Malabar coast, notably Cannanore, resulting in a feudatory subjection of the islands to that state. Delhi had been captured by the Ghazni Ghorians in 1193, and a dynasty established there which lasted till A.D. 1288. The Khiljis succeeded, occupying the period from 1288–1321; and Alá-ud-dín, nephew of Jalál-ud-dín Khiljí, led the first Muhammadan expedition into the Deccan in A.D. 1294. Ten years later the Musalmán armies under the general Málik Káfúr swept over the whole of the Deccan. The Yádava Devagiri State and the Ganapati Warangal State **The Muhammadan conquest.** *1193.* *1288.*

were then both reduced to subjection; and Dwárasamudra the capital of the Hoysala Ballálas was taken and sacked. These early inroads reached even to Tanjore and Madura in the extreme south, but how far the Cholan and Pándyan kingdoms were affected politically is not recorded. Anarchy at any rate followed, over the greater part of the south; the Musalmán governors, the representatives of the old royal families, and the minor local chiefs, all engaging in internecine struggles for supremacy. A slight check was given to the spread of the Muhammadan arms when a confederation of Deccaní Hindu chiefs, led by Ganapati Rája, defeated a large Muhammadan army. The aspect of affairs was later altered by the
1347. revolt of the Deccani Musalmáns against their sovereign in A.D. 1347, which resulted in the establishment of the Bahmaní kingdom of Gulbarga in the Deccan. The Hindus also made one final effort to achieve imperial rule.

The Hindu Vijayanagar dynasty.

40. While the Muhammadan rebels were consolidating their kingdom in the Deccan, another large power was being formed south of the Kistna. This was the
1336. Hindu kingdom of Vijayanagar founded in 1336. The site of the capital was the present Hampi in the Bellary district. The Vijayanagar kingdom speedily rose to a height of influence such as no southern kingdom had yet attained, and held the Muhammadans in check for two centuries; but not without reverses. At the
1364. first conflict in 1364 between the Bahmaní Muhammadans and the neighbouring
1374. ruler of Vijayanagar, the former depopulated the country. In 1374 Mujáid Sháh of Gulbarga overran the whole peninsula down the Cape Comorin. The Bahmaní kingdom presently fell to pieces; being succeeded by five separate kingdoms, hereafter to be named, founded by rival Musalmán leaders. Their jealousies aided
1479. the Vijayanagar sovereigns in the acquisition of power. In 1479 the first Vijaya-
1487. nagar dynasty came to an end, another being instituted by Narasinha. In 1487 this kingdom completely subverted the Pándyan country, Chola having fallen long before. By the close of the fifteenth century the power of Vijayanagar was acknowledged as paramount through the entire peninsula. Small principalities existed, such as Mysore, the Reddi chieftainship of Kondavíd south of the Kistna, Nellore, the Gajapati dynasty of Cuttack, the Bídars of Harpanhalli, and the always independent principality of Travancore; but Vijayanagar was supreme. Narasinha was succeeded in 1509 by Krishna Ráya, who reduced the whole of the east coast of the peninsula into subjection. The dynasty in his day reached its greatest height. His minister was a Bráhman, the well-known Timmarája. The traveller Barbosa describes the city of Vijayanagar in 1516 as "of great extent, "highly populous, and the seat of an active commerce in country diamonds, rubies "from Pegu, silks of China and Alexandria, and cinnabar, camphor, musk, pepper, "and sandal from Malabar." The palaces of the king and ministers and the temples are described as "stately buildings of stone." According to the same authority the kingdom comprised the whole of the kingdom south of the Kistna. Rámarája,
1564. the minister's son, was reigning in 1564 when his kingdom was conquered by the five new Muhammadan dynasties. The kingdom of Bijápur was founded by Adil Sháh in 1489. It retained its independence for 197 years, until it was absorbed by Aurangzeb in 1686. The Nizám Sháhí dynasty of Ahmadnagar was established in 1487 by Ahmad Nizám. It was subverted in 1637 by Sháh Jahán. Imad ul Mulk made himself independent at Berar in 1484, and commenced the Imad Sháhí dynasty, which was extinguished at the end of ninety years by the king of Ahmadnagar in 1574. Kulí Qutb, a Túrkoman who rose to be governor of Golconda, established his independence there in 1512. This dynasty was subverted by Aurangzeb in 1687. The dynasty of Bídar was established in 1498 by Ahmad Baríd. In 1564 these Muhammadan sovereigns combined, defeated the Hindu army at Tálikot, and sacked the capital of Vijayanagar. For a second time the whole of the peninsula was thrown into confusion. The minor chiefs seized the opportunity for throwing off their dependence; and throughout the peninsula arose a large number of petty pálegárs and small chieftains, whose quarrels and wars and struggles for supremacy kept the country disturbed for two and-a-half centuries.

The Náyaks of Madura.

41. The only Hindu chiefs that attained to real power after the close of the Vijayanagar dynasty were the Madura Náyaks, formerly viceroys of Vijayanagar. In the reign of Krishna Ráya of Vijayanagar the rulers of Tanjore and Madura, that is to say of Chola and Pándya, being at war with each other, Nágama Náyak, a Telugu officer of the Ráya, was sent to the support of the Pándyan ruler. After

subduing the Chola Rájá, Nágama imprisoned his ally, and assumed the sovereignty, in consequence of which a force was sent against him under his son Viswánátha Nayak. Viswanátha defeated his father, and sent him prisoner to Vijayanagar; and on the death of the Madura ruler which happened shortly afterwards he was made governor of Madura. He took advantage of the hostilities between the Rájás of Vijayanagar, and their Muhammadan neighbours to convert his government into an independency and was succeeded in it by his descendants. The dynasty continued till the middle of the eighteenth century. The greatest of the line was Tirumala Náyak.

Progress of the Muhammadans.

42. While the country was in this state the Muhammadans gradually pressed downwards, securing the dominion of the parts south of the Tungabhadra and eastwards to the sea, and encroaching southwards, till they had reached the lower confines of the Telugu country by the middle of the seventeenth century, and by the beginning of the eighteenth had extended yet further.

European Settlements in India.

43. The first modern European nation to establish a settlement in India was the Portuguese. They occupied Calicut and Goa on the West Coast at the beginning of the sixteenth century. The two navigators Vasco da Gama and Cabral were the pioneers of Portuguese commerce, and Albuquerque laid the foundations of Portuguese power in India. Portuguese settlers at no time came into conflict with the English, but fell before the Dutch progress or in consequence of the neglect of their parent country. The Dutch were the second of modern European nations that arrived in India. After previous occupation of various stations in the Eastern Archipelago, they settled at Pulicat, Sadras, Pálakollu, and other places on the eastern coast of Southern India, from the beginning of the seventeenth century onwards. This was the period of the Pálegárs, of the Náyak rule at Madura, and of the progress of the Muhammadans southwards. The Dutch rapidly dispossessed the Portuguese; and in the next century they in turn surrendered to the English. The Danes came to Tranquebar in Southern India in the seventeenth century; but their occupation of that settlement was wholly peaceful.

The earliest English Settlement.

44. The European nations, as is well known, began their career in this country as merchants. In order to carry on their occupation, they erected factories, which they were obliged to fortify so as to secure themselves from the hostility of the various native powers. The first place at which the English traded on the eastern coast of India was Peddapalle, now Nizámpatam, a seaport in the Kistna district. Captain Hippon in the ship "Globe" landed there in 1611. He at first had *1611.* touched at Pulicat, but the Dutch Governor refused to allow him to trade. Having left an establishment at Peddapalle with means for carrying on commerce, he sailed to Masulipatam, and proceeded similarly. The Masulipatam station became a well-established factory and was the foundation of the English trade in the East Indies; though the English obtained their first treaty of protection from the Mughal Emperor Jahángír at Surat on the other coast two years later. In 1616 factories *1616.* were established on the West Coast at Calicut and Kranganúr by permission of the Rájá or Zamorin of that country. Subsequently the English established a factory *1619.* at Pulicat, by the side of one already placed there by the Dutch in 1609. This was effected under a treaty concluded two years before between King James I and the States General. But in a few years it was necessary to withdraw this factory owing to the jealousy of the Dutch. In 1625, two years after the massacre of the *1625.* English by the Dutch at Amboyna, the Company's agents at Bantam in Java suggested to the authorities in Europe the expediency of directing their attention to the trade on the Coromandel Coast, and themselves at the close of the season despatched a vessel from Batavia to a place called Armegam 40 miles north of Pulicat, where a small trading establishment was set up. This was not so well suited for trade as Masulipatam, which was preferred as being more immediately adjacent to the seats of native manufacture. The local governor however at the latter place exacted such heavy dues that it was temporarily abandoned. The Masulipatam factory was transferred to Armegam in 1628. Armegam was the *1628.* first place fortified by the English in India. In 1632 the Masulipatam factory was *1632.* re-opened, and in 1634 a small town called Víravásaram, 8 miles north of the port *1634.* of Narasápur in the Gódávari district, was occupied for the purposes of a factory. During this period the great preponderance of the English trade was on the Eastern or Coromandel Coast. The natives there had brought the art of painting calicoes

to a high pitch of perfection and these commodities were in demand not only in Europe, but also in countries to the eastward, in Burma, Siam, and what were known as the Spice Islands in the Indian Archipelago.

Settlement at Madras.

45. Whether owing to the ill-will of the Venkatagiri Zamíndár whose territory was adjacent, or to the fact that the place was not convenient for the inland trade in piece goods, the Armegam factory did not exist long. Mr. Francis Day, who was then a member of the Masulipatam council and chief of the Armegam factory, proposed a removal to the south of the Dutch settlement of Pulicat, and *1639.* in 1639 an arrangement was made with the local Náyak called Damarla Venkatádri Náyudu, by which the English were to be allowed a settlement at the place which is now Madras. The factors subsequently in 1645 judged it prudent to obtain a formal grant from the recognized ruler of the country, who was then Srírangaráyal, a descendant of the ancient Vijayanagar kings. After their defeat by the Muhammadan kings of Bijápur and Golconda, at the battle of Tálikot in 1564, the broken remnant of royalty had fallen back on their southern possessions; first to Penukonda, now in the district of Anantapur, and then in 1594 to Chandragiri. It *1646.* was one of the last acts of his race, for in 1646 the Qutb Sháhí kings of the Deccan expelled him from the country, and he became a refugee in Mysore. The term Madras by which the place has always been designated by Europeans is of doubtful origin; the most generally accepted derivation is from *madrasa* or college. The native name Chennaippattanam is generally connected with the name (Chennappa) of Damarla Venkatadri's father, but this has been doubted by some authorities.

Fort St. George.

46. Without waiting for instructions from the Company, Mr. Day proceeded to the construction of a fortress, which in India is soon surrounded by a town. The latter he allowed to retain its Indian appellation, but the former he named Fort St. George. The territory granted consisted of the ground on which this fort was built and its immediate vicinity, including what was considered to be an advantageous site in the small island formed by two branches of the river Cooum. This was four hundred yards long by about a hundred yards wide; and it could be easily rendered secure against the predatory attacks of native horsemen.

The first thirty years of the Madras Settlement. *1640-1670.*

47. The half century immediately following the first establishment of the town exhibited for the settlers many uneasy situations. The advance of the Muhammadan king of Golconda into the peninsula, and the occasional inroads of Maráthás, hindered the operations of their trade. The Chandragiri Rájá was conquered as mentioned above in 1646 by the Muhammadans; and Neknam Khán, the officer of the king of Golconda who commanded the country surrounding Madras, then known as the Nawáb, was seldom contended with the yearly rent. Presents and fines were exacted, and an embargo was laid upon goods and supplies going to Madras. The new station was for the first twelve years of its existence subordinate to the Presidency of Bantam in Java. In 1652 Fort St. George was raised to the rank of a separate Presidency, independent of Bantam, and Mr. Aaron Baker became the first Governor. In 1642–43, the Agent and Council acquainted the Company with the absolute necessity of giving a due equipment to the fort. In 1651, orders having been received from England not to add to the strength of the fort, the Agent stated that unless the fort was strengthened trade could not be extended. Similar representations were made in 1652 on the arrival of the news that a war between England and Holland was imminent. In 1654 however the Company ordered that the civil establishment should be reduced to two factors, and that the guard should consist of only ten soldiers. The English trade on the Coromandel Coast then declined, as a consequence of the inland wars and the superior force of the Dutch by land and sea. In 1657 complaint was also made that the interference of merchant adventurers had drained the country of goods. By a new arrangement in 1658 all the factories on the Coromandel Coast and in Bengal were made subordinate to Fort St. George. From communications received in 1660 by the Company it appears that the trade at Fort St. George was then beginning to revive. Sir Thomas Chambers had the year before become Governor. In 1661, Sir Edward Winter, a member of the cavalier party in England, was appointed Governor. With a high sense of the prerogative of his nation and of the political exigencies attending the Indian stations, he was nevertheless not supported by the merchants composing his council. By the stand he made against the demands of native powers, a temporary check was given to trade; which circumstance was used to his

disadvantage. In 1665 he was superseded on the ground that he had unduly engaged in private trade. Mr. George Foxcroft, a London merchant, succeeded Sir Edward Winter, and the latter then took a seat as second in council. But shortly, on the pretext that the language of the new Governor was treasonable to the English crown and endangered the position of the settlement, he seized and imprisoned him, and it was only in 1668, when Mr. Foxcroft had been detained for over two years as a prisoner, that Winter yielded to a royal mandate sent out by Commissioners. Mr. Foxcroft then succeeded. The Company in 1669 sent out Sir William Langhorne with six Commissioners to investigate the whole of this transanction; and eventually recalled both the parties. Mr. Foxcroft was succeeded in 1670 by Sir William Langhorne. In that year the fort was besieged by a local Náyak or Hindu district officer, but on application to his superior the Nawáb of the Carnatic the siege was raised. In 1662 a Muhammadan general of Golconda captured the city of St. Thomé. Numbers of Portuguese were on that occasion driven out of the town, and many took refuge in Fort St. George itself and built houses there, thereby strengthening the place.

48. Sir William Langhorne was Governor of Madras from 1670 to 1677, and in the first year of his administration the Muhammadan ruler of the Carnatic made over to the Company his claim on the customs at Madras for a fixed rent of 1,200 pagodas, or 4,200 rupees per annum. In 1671 a French fleet arrived in India, and in 1672 the French forces captured St. Thomé from the Muhammadans, who had held possession of it since 1646. Shortly after this the Muhammmadan army under the command of a general named Bobba Sáhib endeavoured to recover the place. The position of Sir William Langhorne at this juncture was in a high degree critical. He was averse to assisting the French against the interests of Bobba Sáhib; and the latter expected the English to join him directly against the French. Furthermore at the same time a Dutch fleet was cruising off the coast of Coromandel, which had attacked the French at St. Thomé, and though it was thence repulsed, there were anticipations that it would attack Fort St. George. Sir William Langhorne endeavoured to come to definite terms with Bobba Sáhib, but the overtures were rejected. After a year and-a-half the French still remained in possession of St. Thomé; within which time they had established a camp at Triplicane, the Muhammadan quarter of Madras, and fortified it more strongly than the English had fortified Fort St. George. In the face of these belligerent powers, and as trade was meanwhile at a standstill, Sir William Langhorne and his Council at one time contemplated the advisability of abandoning Madraspatnam altogether, for the neighbourhood of St. Thomé, formerly a source of assistance, was now become the cause of continual anxiety. Afterwards however more energetic measures were decided upon, and at a consultation held on the 2nd February 1674, it being recorded that the interests of the Company, as well as the lives of the residents at the Presidency, were staked upon the issue of the circumstances then present, a resolution was made to enlarge and strengthen the fortifications. It is here to be mentioned that at this time four Frenchmen from Java were staying in Fort St. George; and in May 1674 both the Dutch and the Musalmáns peremptorily demanded their removal. To the demand Sir William Langhorne for a long time paid no attention, because of the English alliance with France; but at length the Muhammadan army laid siege to Fort St. George. The Frenchmen refused to leave the place unless they were permitted to go to St. Thomé, and thither the Dutch and Muhammadans would not allow them to proceed. Finally, the President in Council sent them under passports and an escort to the distant Bijápur, the Muhammadan kingdom in the western Deccan. On the 26th August 1674, the French were compelled to surrender St. Thomé to the Dutch, which they did on the condition that their garrison should be transported to Europe. At that moment the news arrived from Europe that in the preceding January peace had been concluded between England and Holland. But for this the Dutch would doubtless have followed up the capture of St. Thomé by the siege of Fort St. George; and the fall of the place might well have followed, as the fortifications were still weak, and they were only two hundred and fifty men in garrison. Dr. Fryer, the traveller, visited Madrás in 1673 and has recorded his observations regarding the localities.

Madras. *1670-1677.*

49. Sir William Langhorne was recalled from Madras in 1678 on a charge of having given undue advantages to a native merchant for a consideration, and

was succeeded by Mr. Streynsham Master, an Indian servant of the Company who had distinguished himself in a defence of Surat against the Maráthás. It was at this period that Sivají, founder of the Maráthá empire, attained the height of his power. He had assumed all the insignia of a monarch; and an English deputation from Bombay had been present at his coronation. This ruler suddenly entered upon an invasion of the extreme south of the peninsula. He set out from his dominions in the Western Ghâts, marched through the Deccan from the north-west to the south-east, and penetrated as far as Tanjore; and on his way he passed by Madras. The entries in the consultation books of the Presidency show that presents were sent to him of ordinary necessaries of which he stood in need at a cost of sixty pagodas. There were constant rumours that he was about to attack the English and Dutch settlements. After a while however and having fought several severe battles with the Hindu ruler of Mysore, the Márathás retired to their own country.

1678 to 1680. 50. About this time a more regular system of administration of the Indian stations was instituted, and the different ranks of the Company's servants were definitely settled. Other factories had recently been established to the north eastward, and the whole of these continued under the authority of the Madras Government until Bengal was separated twenty years later. In 1678 the Governor and Council constituted themselves according to their hitherto existing practice, but more formally, into a Supreme Court of Judicature, for dealing with Europeans and for listening to appeals. This in 1684 was superseded by an Admiralty Court presided over by a Judge Advocate from England. The Admiralty Court by fusion with the Recorder's Court hereafter to be mentioned became in 1801 the first Supreme Court appointed by the Crown; and the latter by fusion with the East India Company's Sadr Court hereafter to be mentioned became in 1862 the present High Court. In October 1680 there were difficulties of internal administration at Madras. A strike took place regarding taxes amongst the inhabitants who dyed native calicoes and the whole body left the Company's jurisdiction and went away to St. Thomé threatening to assassinate such native servants of the Company as refused to join them. These men also prevented provisions and goods from entering the town. The Governor and Council thereupon entertained a hundred Portuguese to keep guard over the calico-washers, that they might not follow the same example. The wives and children of the mutineers were taken out of their houses in Black Town and driven into the pagoda; and it was proclaimed by beat of drum that unless the mutineers delivered themselves up within ten days, all their houses, goods and chattels within the jurisdiction of the Company would be confiscated. Eight days afterwards the ringleaders were arrested at St. Thomé, and brought within the Company's territories. These were committed to prison; and on the same evening the remainder came into the town and made their submission. St. Mary's Church in Fort St. George was opened in this year.

51. Mr. Master held the same views as had previously been held by Sir Edward Winter as to the necessity of accompanying commercial enterprise in the Indies with the exhibition of considerable material force. The experiences which he had gained by residence in the country had also taught him to understand the characters of the different authorities with whom he had to deal, and to give to each his station.

1681–1690. 52. Mr. William Gyfford who succeeded Mr. Master in 1681 soon gave offence to the Company by undue compliance with the desires of the native inhabitants of Madras to escape taxation. The Company had been for a long time anxious to raise a quit-rent from all the householders in Madras, Native and European. They hoped by so doing to defray the yearly charge for repairs and fortifications. Mr. Master had succeeded in raising some such tax; applying it however not for repairs or fortifications but for promoting the sanitation of the Black Town. On his departure the native inhabitants of Black Town petitioned against the tax and the new Governor abolished it. On the 20th September 1682, the Company wrote to the Government of Madras as follows:—"Our meaning as "to the revenue of the town is that one way or another, by Dutch, Portuguese, or "Indian methods, it should be brought to defray at least the whole constant charge "of the place, which is essential to all Governments in the world. People protected "ought in all parts of the universe, in some way or other, to defray the charge of

"their protection and preservation from wrong and violence. The manner of "raising which revenue we shall leave to your discretion, as may be most agreeable "to the humour of that people." This order was frequently repeated, and Mr. Gyfford was at length compelled to decide that a small monthly tax should be levied on all the inhabitants. The heads of the castes were sent for, and they were told that if they were not willing to pay this tax they must sell their houses and remove elsewhere. They agreed to pay annually "nine fanams for every great "house, six fanams for every small house, and three fanams for every little round-"house." The matter nevertheless remained in abeyance till January 1686, when in consequence of peremptory orders from England Mr. Littleton was appointed to collect the tax. A tumult ensued and all shops were shut. To suppress the sedition an armed force was accordingly called out. Proclamation was made that if the heads of the castes did not submit themselves before sunset, their several houses would be pulled down, the ground would be sold, and themselves and their families would be banished the town for ever; and that if the bazaar-people did not open their shops and carry on business as usual, their shops would be confiscated and a fine would be inflicted. The next morning the heads of the castes appeared before the council, and stated that they would not obey their orders; but on perceiving that the latter were determined in the matter, they complied. In the same year the Company approved of the establishment of a Bank at Madras. At this period special mention is made of the interlopers, or private traders, whom the Company's agents were instructed to seize where practicable. On the 12th December 1687, the population of the city of Madras, Fort St. George, and the villages within the Company's boundaries, was reported in the public letter to the Company to be 300,000 persons. In 1687, Pondicherry was established by the French and in 1690 Fort St. David was built by the English.

Affairs in connection with Bengal. *1686–1688.*

53. Mr. Elihu Yale became Governor in July 1687. The early years of his administration are marked by circumstances of importance in connection with the general history of India. The head of the Company in England at this time was Sir Josiah Child, who had instituted a policy in India which had not before been accepted by them, with a view to taking measures of retaliation against the interlopers and native powers who had interfered with the Company's trade. A force had been sent out consisting of ten ships and about 1,000 European soldiers, Bengal being selected for the first operations. In October 1686 hostilities broke out at Húglí prematurely and before all the forces had arrived in Bengal, owing to a quarrel between some English sailors and the police. The affray became general, and finally Captain Nicholson in command of that portion of the fleet cannonaded the town and committed the greater part of it to the flames. The Nawáb of Bengal was desirous of yielding and coming to some arrangement, and the extent alone of the English demands rendered this impossible. The English then repaired to Sutanatí and fortified themselves there. At Bombay also on the other coast Sir John Child, brother of Sir Josiah Child, and Governor made successful ventures by sea against the Mughal shipping. These successes were however only temporary, and the English at Sutanatí were forced to retire from that place and establish themselves on the island of Injellí at the mouth of the Húglí, where they suffered much from sickness. The Emperor Aurangzeb now acted himself with vigour against the English. Masulipatam and Vizagapatam were taken with some loss, and the factory at Surat was seized. In 1688 Captain Heath arrived in Bengal in charge of a fleet and with orders to persevere in the war; consequently negotiations that were pending were broken off. All the officers of the Bengal factories including Mr. Job Charnock, the Company's Agent in Bengal, were embarked on board Captain Heath's ships, and after cannonading Balasor the fleet sailed for Madras and left there the civil establishments. At this moment the English held nothing but their two forts of Bombay and Madras, and in such a position of affairs Aurangzeb might have pressed his advantages. Though master however on land, he was powerless by sea; and considerations connected with the maritime trade and the pilgrimage of Muhammadans to Mecca induced him to come to terms with the English. The factories were restored, and Mr. Charnock returned to Sutanatí; where shortly in the neighbouring village of Calcutta he laid the foundations of the future metropolis of India. In 1688 a mayor and corporation were established in Madras, whose court for the minor administration of justice continued until 1797, when under the presidency of an English Recorder it assumed the title

of a Recorder's Court. The Recorder's Court was merged in the Supreme Court of 1801. In 1688 also instructions were sent out for the establishment of a mint. Anxiety was caused at this period by the appearance of English pirates on the Coromandel Coast. To this period also belongs the first appearance of the Armenians in Madras. By a contract made with the Directors of the Company in June 1688, they were invested with certain privileges and rights, and were thus encouraged to reside within the English settlements.

The Maráthás. *1689–1698.*

54. The affairs of Madras were at this time intimately connected with the Maráthás. The country between the rivers Kistna and Coleroon is known by the general name of the Carnatic. Politically it was divided at this time into a northern and a southern region, which may be distinguished as the Mughal Carnatic and the Maráthá Carnatic. The Mughal Carnatic had been previously a province of the independent Muhammadan State of Golcondah and had recently owing to the conquests of Aurangzeb become a province directly under the Mughal; and this included the English settlement at Madras. The Maráthá Carnatic comprised the southern region which had been conquered by Sivají, and included the French settlement at Pondicherry. The frontier between Mughal and Maráthá dominion was formed by the celebrated fortress of Gingee. This was seated on three precipitous hills or rocks about six hundred feet high connected by lines of works, and enclosing a large triangular plain. For many ages it had been regarded as the strongest military post in the Carnatic, and it had once been the stronghold of the Dravidian rulers of Chola. In 1677 it had been captured by the first Sivají. In 1689, it was in the possession of his son Rámarája and was the frontier fortress of the Maráthás against the Mughals. In 1690 Zulfikár Khán commanded the Mughal army in the Carnatic and laid siege to Gingee. This general, one of the most distinguished persons of his time, was not only in command of the Mughal army in Gingee, but also exercised a powerful influence at court. On a rebellion breaking out in the Mughal army, Mr. Yale supplied Zulfikár Khán with ammunition and rendered other services; as a reward for which he obtained a farmán from the Mughal general, confirming the English Company in the possession of all their settlements in Golcondah territory and Gingee territory. In 1691 the Maráthás were still masters of Gingee, Rámarája controlling the whole country from Gingee to the river Coleroon, and so firmly was his power established, that the English when requiring the site of Fort St. David had found it necessary to purchase it from him. In 1692 Zulfikár Khán still besieged Gingee, being accompanied by the youngest son of the Emperor Aurangzeb, named Kambaksh. In December 1692 the Mughals were defeated by the Maráthás and many of the Mughal officers fled to Madras in disguise. This year a farmán was obtained from Zulfikár Khán, granting Egmore, Purasavákam, and Tandúr to the Company rent-free. The villages were afterwards demanded by the Poonamallee Náyak, who alleged that the Nawáb had granted them to himself, and the Agency experienced some difficulty in obtaining possession. Finally however, in March 1694, permission was received from Zulfikár Khán to take possession of these places. In January 1693 an English soldier in the service of Zulfikár Khán returned to Madras bringing news that Kambaksh had essayed to go over to the Maráthás, and had been seized and imprisoned by Zulfikár Khán; and that the camp of the latter having been reduced to starvation from want of provisions, the Mughals had retired to Wandiwash, leaving most of their baggage at the discretion of the Maráthás. In 1696 the Maráthás were found to be increasing their forces at Gingee, and the settlement at Fort St. David were warned to be if possible on good terms with Rámarája and his officers. Later in the same year, Zulfikár Khán sent to Madras to borrow a hundred thousand pagodas, equivalent to above thirty-five thousand pounds sterling. Mr. Nathaniel Higginson, who was Governor of Madras, sent a present, but declined to lend the money; and there was some anticipation that Zulfikár Khán would take reprisals on the town. Eventually in 1697 Zulfikár Khán obtained reinforcements and defeated the Maráthás near Tanjore, and in 1698 he captured Gingee. This general had already himself granted farmáns confirming the English in the possession of their territorial settlements; and he now procured them corresponding farmáns from the Vizier in the Emperor's name. For this a consideration was paid of ten thousand pagodas or nearly four thousand pounds sterling.

Madras. *1689–1692.*

55. To return to matters more immediately concerning the settlement, in 1689 war had broken out between France and Holland, and in August 1690 the combined

Dutch and English fleets fought an indecisive action with the French off Madras. The next year Sir John Goldesborough was sent out to Madras with authority to decide certain disputes between Mr. Elihu Yale and his Council. Directions were given to improve the revenue of Madras by increasing quit-rents, and by imposing a duty on licenses for public houses. The town was to be extended, and a quarter was to be assigned to the Armenians. It was also ordered that the members of the Court of Aldermen should be of different castes, namely "one Armenian, one or two Hebrews, one or two Portuguese, one or two Gentoos, and one Moor or Mussalman." The factories at Kúnimedu and Cuddalore were withdrawn. The military establishment at Fort St. George was also retrenched. As a result of the commission at Madras Mr. Nathaniel Higginson became Governor in 1692.

56. In August 1693 the Dutch appeared before Pondicherry with a large fleet, and captured it after a siege of twelve days. In 1694 there was a report of a French equipment of nine ships for India, and it was ordered that additional precautions should be taken at Fort St. George and Fort St. David. Meanwhile the depredations of pirates increased, and trade on the Coromandel Coast was much depressed. In 1697 a petty attack was made on the Company's factory at Anjengo on the Travancore coast. In 1684 the Company had obtained permission from the native queen to fortify Anjengo, but in November 1697 the same ruler sent a force to eject the English as pirates. The native force was repulsed in two engagements, without loss. About the same time Salím Khán, brother of Dáúd Khán hereafter to be mentioned, made two attempts upon Cuddalore, both of which were defeated. By the treaty of Ryswick in September 1697 Pondicherry was restored by the Dutch to France. *1693–1697.*

57. In 1698 Bengal was made independent of Fort St. George. In the same year Mr. Thomas Pitt, grandfather of the celebrated Earl of Chatham, succeeded Mr. Higginson as Governor of Madras. Disputes now arose between the old or London Company, the lately formed English Company, and the Scotch East India Company originally embodied by King James I in 1617. These led to depression of trade, and the circumstances finally brought about an amalgamation of all traders to India, under the appellation of the 'United East India Company,' established under Queen Anne's Charter in 1702. *1698.*

58. In 1701 Zulfikár Khán was succeeded by Dáúd Khán as Nawáb or military commandant of the Carnatic. The English sent this officer letters and presents. A present valued at seventeen hundred pagodas was given in public, and another of three thousand rupees was given in private. The Nawáb however sent back the presents desiring to receive ten thousand pagodas as his predecessor had done, and he threatened to destroy Madras and establish St. Thomé in its place. Mr. Pitt refused to pay the money, landed men from the merchant ships, increased the train bands, and raised a force of Portuguese. Dáúd Khán blockaded Madras for three months, but finally received the present. In 1703 renewed attempts were made by the Náyak of Poonamallee to obtain possession of the Company's outlying villages of Egmore, Purasavákam, and Triplicane, which were frustrated by the decided action of the Government. Up to 1703, gunpowder formed one of the articles supplied from England; but about this period the manufacture of it was so much improved at Madras, as to preclude the necessity of sending any more. In 1707 occurred serious disputes between the right and left hand castes or factions, which resulted in the retirement of the former to St. Thomé, but the matter was finally arranged. The administration of Mr. Pitt was distinguished by the establishment of closer relationship with the Court at Delhi. Aurangzeb died in 1707, and the event was followed by a war between his sons. The elder son gained the victory, but being apprehensive lest his rival should find a refuge in Madras, and make his escape to Persia, he sent a letter of conciliation to Mr. Pitt by an influential official. Mr. Pitt, while making a suitable response, asked for a farmán confirming all the privileges which had been granted by Aurangzeb, and the request was granted. *1701–1707.*

59. Madras was at this time the most important factory possessed by the Company in India. Other factories on the Coromandel Coast were Fort St. David, Cuddalore, Masulipatam, Porto Novo, Madapollam, and Vizagapatam. On the Western Coast the Company possessed the island of Bombay, with factories at Surat, Broach, Ahmadábád, Suwáli, Anjengo, Kárwár, Tellicherry, and Calicut. *1707–1739.*

In Bengal they had Fort William, and Sutanatí or Calcutta, with factories at Patna, Malda, Dacca, Balasor, Rájmahál and Kásimbázár. The English paid their yearly rent of twelve hundred pagodas to the Nawáb of the Carnatic. The Nawáb was subordinate to the Nizám of the Deccan, now styled the Nizám of Haidarábád; and paid a yearly tribute to the latter. In 1738–39, the power of the Mughal King or Pádsháh received a severe blow from the Persian invasion under Nádir Sháh, and from that date the provinces began once more to grow independent of the Court at Delhi. The Nizám of the Deccan of this period is best known by his title of Nizám-ul-Mulk, or "Regulator of the State." He had served in the armies of Aurangzeb and had filled important posts in the Court at Delhi, had been appointed to the government of all the Mughal conquests in the Deccan, and had engaged in frequent wars against the Márathás of Poona to the west, and those of Berar to the northward. His dominion extended from the river Gódávari southward to the river Kistna, and was bounded on the west by the Maráthás of Poona; on the north by the Márathas of Berar; on the east by the Bay of Bengal. The province of the Nawáb of the Carnatic lay to the south of the Nizám's dominions. It extended from the river Kistna southwards to the river Coleroon, being bounded on the north by the Nizám's territory; on the west by the Mysore country; on the south by the Hindu kingdoms of Trichinopoly and Tanjore; on the east by the Bay of Bengal.

60. The list of Governorships down to that of Mr. Nicholas Morse in 1744 is not distinguished by any events of special interest.

The French in India. *1668-1742.*

61. The first establishment of the French in India dates as far back as 1668. From 1503 to that period, various attempts had been made to obtain for France the commerce of this part of the world, but without success. The French first adventured to India in 1601, when two ships were fitted out from St. Maloes, under the command of Lieutenant Bardelieu. They were both lost off the Maldives before reaching their destination. In 1604 Henry IV incorporated the First French East India Company with a charter for fifteen years. Colbert did not however allow himself to be discouraged by the fruitless results of efforts prolonged for more than a century and a half. In 1664 he re-established on a better and more extensive basis the East India Company which Cardinal Richelieu had created twenty-two years before. The monopoly of the trade for fifty years was accorded to this Company, which soon collected funds to the amount of 15 millions of francs. In the commencement it displayed great activity. Two successive expeditions were undertaken for the purpose of renewing the attempts at colonization before made in Madagascar; but these expeditions having failed, the Company renounced the projects which they had formed for Madagascar, and a direct commerce with India was again undertaken and continued with spirit. In 1668 a merchant of French origin named Caron, an active and well experienced man, became chief of the East India Company. He first selected Surat, but this town, though flourishing and well situated, did not realize the idea which he had formed for the chief establishment in India. He was desirous of having a port in a place where spices grew; and the Bay of Trincomalí in the island of Ceylon appearing to him the most eligible spot, he took it from the Dutch, then at war with France. These however were not long in repossessing themselves of it, and Caron then passed to the Coromandel Coast. He there took in 1672 St. Thomé, which had been in the possession of the Dutch for twelve years; but in 1674 the Dutch again compelled the French to restore this conquest to them. This event would have effected the ruin of the Company, whose affairs had been for some time in a distressed condition, if one of its agents named François Martin had not collected the wrecks of the colonies of Ceylon and St. Thomé, composed of 60 Frenchmen, to people the small town of Pondicherry; which as well as the surrounding territory he had purchased in 1674 with the funds of the Company from the governor of Gingee, then superintending all Sivají's conquests in the Carnatic. The country was however nominally subject to the Deccaní king of Bijápur. Martin fortified Pondicherry, and by his superior administration the small colony prospered and soon gave the best hopes of success. The Dutch attacked it in 1693; Martin, after defending himself there with great courage, was compelled to capitulate, and on the 5th September 1693, the town was given up. By the treaty of Ryswick, Pondicherry was restored to the French in 1697, who received it from the hands of the Dutch in a much better state than when they yielded it to them. In 1699

this town became the capital of the French possessions in India. The able administration of Martin succeeded in making it the centre of a rich commerce, and one of the most important towns which Europeans possessed in Asia. A number of Frenchmen soon spread themselves on the Indian continent and formed new factories. Chandanagar in Bengal was ceded by Aurangzeb to the French East India Company in 1688. In 1727 this Company obtained the cession of Mahé. In 1739 it purchased Kárikál from the king of Tanjore. And in 1752 Yanam and Masulipatam, which the French had two years before seized, were definitely ceded to them. The Governors-General of the French establishment in India, Messieurs Dumas and Dupleix, contributed greatly from 1735 to 1754 to the prosperity of these possessions. Amongst other advantageous concessions, M. Dumas obtained from the Great Mughal the privilege of coining money at Pondicherry, which gave to the Company a yearly income of about 500,000 livres. M. Dupleix, appointed in 1730 Governor of Chandanagar, succeeded in less than twelve years in making that place one of great commercial importance. The town of Pondicherry, the government of which was confided to the same officer in 1742, together with that of the other establishments, was equally indebted to him. It was under his government that the French possessions and power in the East Indies attained their highest growth.

Wars between the French and the English. *1744–1749.*

62. Meanwhile and until the end of the first half of the eighteenth century the English had carried on their trading operations tolerably unmolested in the midst of the continual wars between the Musalmán and Maráthá conquerors of the old southern Hindu powers. The affairs of the French and English between the breaking out of the first war in 1744 and the final overthrow of Lally at Pondicherry by Coote in 1761, sixteen memorable years for both parties, cannot be related here in detail. The European war broke out in 1744. Before that however, indeed as early as 1741, the French ministry sent an armament to India under M. Labourdonnais, who, already distinguished by his talents and by his successful government of Bourbon and the Mauritius, was also intimately acquainted with the politics and resources of India. He was to watch the progress of events in Europe, and be ready to act against the English in case war should be declared. These preparations were known to the English ministry, who in order to check them sent a squadron of four ships to India under Commodore Barnet. That officer for some time cruised successfully in the Straits of Sunda, and after the declaration of war proceeded to the Coromandel Coast. The French Governor at Pondicherry was then M. Dupleix, the English Governor at Madras was Mr. Nicholas Morse. The English troops in the Presidency numbered only 600. On the 4th September Labourdonnais attacked Madras. On the 10th it capitulated, and the generosity of Labourdonnais not being equalled by that of Dupleix, the English Governor and merchants were sent as prisoners to Pondicherry. Mr. Charles Floyer at Cuddalore assumed charge of the English settlements. Cuddalore itself was twice attacked by the French, and twice escaped. In 1747 reinforcements having arrived from England, the English in turn besieged Pondicherry, with Admiral Boscawen on sea and Major Stringer Lawrence on land. Ensign Clive distinguished himself at this siege, which however was raised. The peace of Aix-la-Chapelle took place in 1748, and the arrangements consequent on it reached India at the end of 1749, when Madras was restored to the English. The French, during the four years they occupied it, had considerably improved the fort, by enlarging and strengthening the bastions and batteries. They had also demolished that part of Black Town immediately adjoining the north wall of the fort, and formed an excellent glacis. Another glacis had also been cleared to the south. The defences, however, were considered far less strong than those at Fort St. David.

1749–1752

63. The European war being thus ended, the forces of the two powers were under the necessity of finding occupation and profit in the various wars between the native princes. It usually happened that their sympathies or their interests were enlisted on opposite sides. The campaigns of the Nawábs Zulfikár Khán and Dáúd Khán in the Carnatic, during the reign of Aurangzeb, have been already noticed. On leaving the Carnatic, under orders from the Emperor the latter had appointed Sádat Ullah as his deputy, who governed the provinces from 1710 to his death in 1732 with much moderation and ability. On his demise his nephew Dost Alí Khán assumed the government of the Carnatic, as it were independently; for it does not appear that the Emperor of Delhi the nominal superior, or Nizám-ul-Mulk

of Haidarábád the real superior, were consulted at all. Dost Alí had one son, Safdar Alí; and had married two daughters, one to Murtazá Alí Khán, the other to Chanda Sáhib. At this juncture the Maráthás under Raghují Bhonsla invaded the Carnatic, and in an action with them Dost Alí was killed. Safdar Alí now made terms with Raghují, and, on condition of the payment of one hundred lakhs of rupees was recognised as Nawáb of the Carnatic. But meanwhile Safdar's brother-in-law Chanda Sáhib, on pretext of assisting the widowed Rání, had obtained possession of Trichinopoly; and Safdar was too weak to attack him. Raghují therefore returned to the Carnatic after his visit to Sátára in 1741 and besieged Trichinopoly, when Chanda Sáhib was obliged to capitulate, and as a measure of safety was sent to Sátára. During these transactions however Chanda Sáhib had placed his wife and family in the French settlement of Pondicherry, under the charge of M. Dupleix the Governor; and this act led subsequently to strange and important events. In a year after his assumption of the Government, Safdar Alí was assassinated by his second brother-in-law Murtazá Alí who was proclaimed Nawáb; but the family of Safdar Alí had obtained protection in the English factory of Madras, and his son, a minor, was also proclaimed as successor to his father. To put an end to these convulsions Nizám-ul-Mulk marched from Haidarábád in 1743 at the head of an overwhelming force, and setting aside the claims of the pretenders Chanda Sáhib and Murtazá Alí appointed one Anwar-ud-dín to the Government of the province during the minority of the son of Safdar Alí. The young Nawáb was however assassinated a few years later, and Anwar-ud-dín became Nawáb of the Carnatic, and was thus the founder of the family which still exists. These remarks will explain the relations which existed between Anwar-ud-dín and Chanda Sáhib. The former had attached himself to the English, the latter to the French. The former though short-lived transmitted his attachment for the English to his son Muhammad Alí. The last-named ruler was indeed called "the Company's Náwab." Again when Nizám-ul-Mulk died in 1748, he was succeeded by his son Nazir Jang; but the title was disputed by Musafir Jang, the son of a deceased elder brother of Nazir Jang. In this also the direct claimant looked to the English, and his opponent looked to the French. The Maráthás at this time still held supreme power in Tanjore and the adjacent country. The English first in 1749 assisted a claimant to the Maráthá throne of Tanjore, against a relative and were rewarded by the cession of the town of Devakóttai. Then in the same year the French took up the cause of Chanda Sáhib, in alliance with Musafir Jang; the double aim being to secure for these claimants the Nawábships of Arcot and the Subahdári of Haidarábád. Opposed to them were Anwar-ud-dín, the then Nawáb, and Nazir Jang, the then Nizám, who had just succeeded. Musafir Jang succeeded in securing the throne of the Nizám, and the triumph of the French under Dupleix was wholly complete until Clive appeared upon the scene and to a large extent changed the course of the war. Clive seized Arcot, the capital of the Carnatic, on the 30th August 1751; while Chanda Sáhib and the French were besieging Muhammad Alí, the son of Anwar-ud-dín recently killed in action in Trichinopoly. Clive himself was besieged in turn; but repulsed all attacks and followed up his success by the victory of Arní, which virtually placed the Carnatic once more under the ally of the English, Muhammad Alí; although the siege of Trichinopoly was not formally raised until the French detachment, which had retreated to Srírangam, surrendered to him and Major Lawrence in June 1752. Chanda Sáhib was eventually assassinated by a Maráthá, probably at the instigation of Muhammad Alí. Musafir Jang retained the Nizámship, under French protection for a brief while; and dying in action when engaged with some feudatories, was succeeded by Salábat Jang, a son of Nizám ul Mulk, also placed on the throne by the French.

1752–1754. 64. A quarrel next broke out between Muhammad Alí and Nanjaráj, the minister of the Rájá of Mysore. The assistance of the latter in the recent war had been procured by the Nawáb by means of a promise to cede Trichinopoly if he were victorious, but when he had attained the object of his wishes he declined to fulfil his agreement. Nanjaráj then had recourse to force, and though the English at first hesitated to assist the Nawáb under such circumstances the conduct of Nanjaráj in other matters left them no alternative but to treat him as an enemy. The French supported the Mysorean; and a succession of engagements took place, chiefly in the immediate vicinity of Trichinopoly, in which the English were almost

uniformly successful. The recall of Dupleix on the 14th October 1754 led to a cessation of hostilities, but the English continued to aid the Nawáb of the Carnatic in the internal management of his dominions; the Nizám Salábat Jang receiving similar assistance from the French under M. Bussy.

65. The theatre of action was then for some time transferred to Bengal, where Clive took command of the English army; but hostilities recommenced in Southern India in 1757 as soon as it was known that war had again broken out in Europe between the French and English. The French took advantage of the English forces being dispersed in various expeditions, and made an unsuccessful attack on Trichinopoly; while another detachment succeeded in gaining possession of Vizagapatam. In 1758 a French fleet appeared off Fort St. David, and that fort fell on the 2nd June. Devakóttai was next reduced, and the French commander Count de Lally made a triumphal entry into Pondicherry. But here his success ended for the time, and an expedition against Tanjore resulted in complete failure. In December however he again besieged Madras itself. On the 9th December Colonel Lawrence who commanded the English withdrew all his outposts to "Choultry Plain," and on the 12th into the Fort. The attempts made by the English forces in the interior, to assist Madras during this siege, were ineffectual. In fact almost all the English troops were in the Fort. Captain Preston however with Muhammad Yusuf, a Muhammadan partizan of the British, made an attack on the French quarters at St. Thomé in January. Owing to the cowardice of the division under Muhammad Yusuf, though he personally made great exertions, this failed, and Preston fell back on Arcot to raise fresh levies. Major Calliaud also came up in February with a detachment from the south, accompanied by several of the Nawáb's troops; and on the 7th a sharp engagement took place at the Mount, the French having unsuccessfully attacked Calliaud's position. Calliaud however was obliged to fall back on Chingleput. This siege was raised two months afterwards when an English fleet appeared in the roads. In the meantime the English arms under Colonel Forde were progressing satisfactorily towards the north, where Clive had sent a detachment to operate in the Northern Circars, ere this was ceded by the Nizám to the French. Their successes culminated in the fall of Masulipatam on the 7th April, by which the French influence with the Nizám was destroyed, and a tract of territory around Masulipatam extending eighty miles along the coast and twenty miles inland was ceded by him to the English. The operations in the south were of a minor nature until 22nd January 1760, when the French under Lally were completely defeated at Wandiwash, near Arcot, by Colonel Coote who had arrived with reinforcements from England. This was followed by the capture within a fortnight of Gingee and Arcot. Minor forts fell in succession, and by May the English were in a position to lay siege to Pondicherry. Lally then had recourse to the services of Haidar Alí, an adventurer who subsequently usurped supreme power in Mysore, but at that time merely held high military command under the Rájá. An English detachment sent to meet the Mysoreans was defeated, and the situation of the English might have become critical had not affairs at home recalled the Mysore troops to their own country. Deprived of the aid of the Mysoreans the French cause soon became hopeless, and on the 16th January 1761 Pondicherry surrendered. With this event the French power in the Carnatic virtually ended. By the peace of Paris in 1763, Pondicherry was restored to the French, but with a territory less extensive. Mahé, Kárikál, Chandarnagar, and other factories in Bengal were in like manner restored, but they were not occupied before 1765. *1757–1763.*

66. So far as the English were concerned there were no more military operations in Southern India until 1766, beyond granting such aid as was from time to time necessary to enable the Nawáb of the Carnatic to repress insurrection. Negotiations were carried on with the Nizám of Haiderábád for the cession of the Northern Circars, but with no very satisfactory results; and in 1765 sanads transferring these tracts to the Company were obtained direct from the Padshah of Delhi, whose paramount authority was recognized by the Nizám. The Madras Government however hesitated to avail themselves of the powers thus assigned to them except with the consent of the Nizám; and in 1766, although sending a body of troops to secure their possession, they entered into a treaty with the Nizám, agreeing to pay tribute for the Circars and to defend the Nizám against his enemies. In the meantime the Mysore adventurer, Haidar Alí, **The First Mysore War.** *1766–1769.*

had succeeded, not only in obtaining supreme power in that province, but in extending his dominion on all sides; and the English were speedily called on under the treaty to assist the Nizám and the Maráthás in checking the advance made in the direction of their territories. No sooner however had operations commenced than Haidar Alí, by judicious expenditure of treasure, not only bought off the Maráthás, but even induced the Nizám to desert his allies and join him in a descent upon the Carnatic. Colonel Smith, who commanded the English troops, finding himself thus opposed to a force very much larger than his own, commenced a retreat, followed by the allies who overtook him at Chengam. The English repulsed the attack thus made, but were compelled to continue their retreat to Tiruvannámalai. On being attacked at that place the victory of the English was decisive, the troops of Haidar and of the Nizám retreating in the utmost confusion; while bands of marauding horse, who had been plundering the country up to the very gate of Madras under the command of Haidar's son Típú, a boy of seventeen, considered their situation to be no longer secure, and drew off to rejoin the rest of the army. Colonel Smith however was too weak to follow up his victory, and withdrew his troops into cantonment for the rains, which were now at hand. Haidar at once took advantage of this inaction to reduce a few unimportant fortresses, but his movements were checked at the hill fort of Ambúr; where Captain Calvert, with a garrison of five hundred sepoys and fifteen Europeans, defied the utmost efforts of Haidar's armies for nearly a month, when he was relieved by Colonel Smith on the 7th December 1767. Haidar then drew off, and after a few skirmishes he retired above the ghâts, having learned that an expedition from Bombay had captured his fleet in the harbours of Canara and commenced hostile operations in his territories on the Western Coast. Risking an invasion from the east, Haidar hurried over to meet what to him seemed the more imminent danger, and appeared suddenly before Mangalore in such force as to compel the re-embarkation of the expedition. In the meantime, though very imperfectly informed of Haidar's actual movements, the Madras Government resolved to commence offensive operations; and one body of troops under Colonel Wood proceeded to reduce the fortresses under the south-eastern slopes of the ghâts, while another entered Mysore proper under Colonel Smith. The movements of both detachments were at first uniformly successful, but as soon as they had united in August 1768, with the view of attacking Bangalore, Haidar returned from the Western Coast and made an attack on the camp of a Maráthá contingent; a movement which though unsuccessful was sufficient to show that it would not be possible to reduce Bangalore unless a decisive victory could be first obtained over Haidar in the field. Various marches and counter-marches were undertaken with this object, but in vain; and after reconquering a number of the fortified places on the tableland, Haidar descended into the lowland by passes unknown to the English, and retook the fortresses in Coimbatore, the Barámahál, and Salem, which in almost all cases had been left inadequately supplied with troops. He did not however risk an engagement in the field with Colonel Smith; and a treaty was concluded on the 4th April 1769, on the basis of a mutual restitution of conquests with the exception of Karúr, which was ceded to Haidar on the ground of its being an ancient dependency of Mysore.

The Second Mysore War. *1780–1784.*

67. From the date of this treaty until the year 1780 the military operations in the south of India, other than the usual duties of assisting the Nawáb of the Carnatic in keeping peace in his own dominions and in his disputes with the Tanjore Rájá, consisted in the capture of Pondicherry from the French in 1778, and the reduction of the French settlement of Mahé on the Western Coast in 1779. These events were a consequence of the renewed war in Europe between France and England. Sir Hector Munro was the English commander; and the Governor was M. de Bellcombe, who made an obstinate defence. The garrison consisted of 3,000 men, of whom 900 were Europeans; the besieging army of 10,500 men, of whom 1,500 were Europeans. The war which broke out again with Haidar in 1780 arose from the fact that the Nawáb of the Carnatic failed to furnish the supplies necessary to enable the English to fulfil the stipulations of the treaty of 1769. Haidar succeeded in forming an alliance with the Nizám and the Maráthás, and descended on the plains of the Carnatic in July 1780, burning crops and devastating villages; so that a cordon of blackened desert was formed around Madras, commencing at the lake of Pulicat, extending some fifty

miles inland, and terminating a little to the north of Pondicherry. Sir Hector Munro proceeded to Conjeeveram, and directed Colonel Baillie to join him there with troops from the north. Haidar endeavoured to prevent the junction, and Sir Hector Munro seeing that Colonel Baillie was in danger, sent a detachment under Colonel Fletcher to his aid, which successfully eluded the enemy and joined Colonel Baillie on the 9th September, only to be included however in the general massacre which took place when Colonel Baillie's force was attacked by overwhelming numbers on the following day. Sir Hector Munro considered Conjeeveram no longer tenable when he heard the news of this disaster, and commenced a retreat to Madras; which he reached on the 14th September, leaving the field open to Haidar. On receipt of the intelligence at Calcutta, the Governor-General Warren Hastings suspended Mr. John Whitehill, the Governor of Madras, and despatched Sir Eyre Coote with reinforcements. The latter arrived on the 1st November 1780, but was unable to take the field until the 17th January 1781. On the 19th he relieved Chingleput, and on the 21st retook Karunguzhi; which had the effect of raising the siege of Wandiwash, a place defended with great distinction by Lieutenant Flint. Hearing of the arrival of a French fleet off Pondicherry, Sir Eyre Coote proceeded to that place, but, finding that the fleet had brought no land forces, he turned his attention to the protection of Cuddalore. Haidar had followed him down the coast, but moved off when the English general offered battle. Thus hampered, the troops remained almost inactive until the 18th June, when an ineffectual attempt was made to capture Chidambaram. The news of this failure emboldened Haidar to make a decisive attempt to annihilate the English army, and he accordingly advanced and took up a position close to Sir Eyre Coote's camp at Porto Novo, a small town on the coast about 14 miles south of Cuddalore. The battle commenced early on the morning of the 1st July 1781, an English fleet lying close in shore with the view of enabling the embarkation of the remnant of the army in the contingency of its being defeated in an encounter with an enemy eight times its numerical superior. The battle was long and severe, but by four o'clock in the afternoon the enemy were in precipitate retreat. The want of proper equipment rendered Sir Eyre Coote unable to take full advantage of the victory which he had gained, but he succeeded in again relieving Wandiwash on the 18th July; after which he proceeded northwards and joined a detachment from Bengal at Pulicat, having eluded the force sent to intercept him by adopting a line of march hitherto supposed impassable for troops. Thus reinforced he marched against the fortress of Tiruppásúr and procured its surrender on the 22nd August, shortly before Haidar's relieving army appeared on the field. A general action took place on the 27th; but with no very decisive result, though the English kept possession on the field. A month later, on the 27th of September, the English commander surprised the enemy near Sholinghur and gained such a victory as put him in a position to throw provisions into Vellore; which had been defended from the commencement of the war. In November the English army retired for the rainy season to Madras, where it remained until the following January, when it had once more to advance to the relief of Vellore. Haidar then turned his attention to Cuddalore, and succeeded in reducing it with the assistance of a French contingent which had landed at Porto Novo. The reduction of Perumákovil by Haidar followed, but Sir Eyre Coote once more arrived in time to save Wandiwash. In the meantime war had broken out with the Dutch as well as with the French, and the Dutch settlements of Sadras, Pulicat, and Negapatam had been captured. A portion of the force employed for the reduction of the latter place was subsequently detatched under Colonel Brathwaite to operate in Tanjore. Deceived by the spies, the small force was suddenly surrounded by superior numbers under Haidar's son, Típú, and only a small remnant escaped with their lives. To counterbalance this, a rebellion had broken out in Malabar, and a small force of English sent to their aid gained a considerable victory at Tellicherry, which necessitated the immediate despatch of Típú to the Western Coast; and Haidar Alí, considering himself overmatched by Sir Eyre Coote, determined to quit the Coromandel Coast. The English commander then returned with his army to Madras, and General Stuart assumed the command in his place. The English force on the Western Coast was scarcely strong enough successfully to oppose that brought against it, but the news of the death of Haidar at Chittoor on the 7th December 1782 led to Típú's speedy return to the head-quarters of the principal army; thereby leaving the field

open to the English, who were shortly afterwards reinforced by a considerable number of troops from Bombay under General Matthews. Several places on the coast fell in rapid succession, and eventually the English penetrated to Bednor above the ghâts. Here however their success ended, Típú returning and compelling the surrender of the place on the 3rd May; after which he marched to the siege of Mangalore, where a small fort was in the occupation of Colonel Campbell. The garrison of this place was insignificant and the material defences of the place equally so, but Típú was unable to take it by assault and his large army remained for many months practically inactive, while his French allies under M. Bussy were being besieged in Cuddalore. On the receipt of the news of the conclusion of peace between France and England, an armistice was agreed upon under which Típú was bound to provision the garrison of Mangalore. He however supplied provisions which were unfit for consumption, and the garrison, broken down by famine and sickness, capitulated on the 30th January 1784; the health of the commander being so undermined that he expired on the 23rd March following. After much delay, peace was ultimately concluded on the 10th March on the basis of a mutual restoration of conquests. During this war many of the English prisoners, including General Matthews, were put to death by Típú.

The Third Mysore War. *1791–1799.*

68. After the conclusion of peace with the English, Típú seized about thirty thousand of the Christians of Canara, forcibly converted them to Muhammadanism, and deported them to the country above the ghâts. Subsequently, rebellions of the Náyars of Malabar on account of a similar exercise of religious zeal in that portion of his territory led to expeditions for their suppression; and many of the Náyars having taken refuge in Travancore, Típú resolved to invade that country in their pursuit, notwithstanding an intimation that such a proceeding would involve him in another war with the English. His first attempt to enter Travancore ended in failure. A second was more successful, and the country was overrun; but, on his return to Coimbatore, Típú found an English army in the field at Trichinopoly under the command of General Medows, the Governor of Madras, who had also entered into alliances with the Maráthás and the Nizám. Típú at first withdrew to Seringapatam, which he had established as the capital of his dominions; and the English met with little opposition in the reduction of the various forts along the south-eastern slopes of the ghâts until the 7th September, when their army was attacked by a force commanded by Típú in person, which had descended by the Gejalhatti pass. The attack was repulsed, but General Medows' efforts to bring on a general action were evaded by Típú; and nothing but indecisive skirmishes took place, until the Governor-General, Lord Cornwallis, took the field in person, and assuming the command on the 29th January 1791, at once commenced preparations for a march upon Bangalore, concentrating his army at Vellore. Típú hastened to intercept his advance, which he expected would be made by the passes near Ambúr, but the demonstration in that direction was a feint, and the tableland was reached by the more northerly pass of Mugli without a shot being fired. The pettah or town of Bangalore fell early in March, and on the night of the 20th the fort was taken by assault after a severe contest of little over an hour. While these operations were going on in Mysore, Colonel Hartly from the Madras side had defeated the Sultan's troops near Calicut; and General Abercrombie, Governor of Bombay, had landed at Tellicherry with a considerable force, and reduced Cannanore without encountering much opposition. But little difficulty was met with in the operations in that neighbourhood, and within a very short time the whole of Malabar was in the occupation of the English. Operations on a smaller scale were conducted in the north in concert with the Maráthás and the Nizám, the latter having also despatched a body of about ten thousand horse to join Lord Cornwallis' army.

69. On the 4th of May the English army left Bangalore to march against Seringapatam; but the route was so difficult, the means of transport was so limited, and the devastation of the country by Típú had been so well carried out, that notwithstanding a successful engagement at Arakere only nine miles from Seringapatam, Lord Cornwallis was compelled to abandon his plan of operations for the time and retire to the vicinity of Bangalore, where he occupied himself for some time in reducing the hill forts. The Nizám's troops and the Maráthás having marched from the north and reinforced his army with both men and supplies, Lord Cornwallis again appeared before the walls of Seringapatam on the 5th February

1792. On the night of the 6th, the outlying encampment and redoubts were carried and the city closely invested on two sides. Preparations were made for the vigorous conduct of the siege, and on the 16th the army was joined by that of General Abercrombie from Malabar. A few days previously Típú had made overtures for peace; but the negotiations did not lead to a cessation of preparations for the siege, and the fall of Seringapatam was close at hand when on the 24th February orders were issued for the discontinuance of all hostilities. Peace had been agreed upon on the basis of a cession to the allies of one-half of the dominions of which Típú was in possession before the war, the payment of three crores and thirty lakhs of rupees, and the restitution of all prisoners including those retained from the time of Haidar. Under this treaty the English came into possession of the Bárámahal, Dindigul, Malabar, and Croog; the latter being restored to the Rájá, who had rendered essential aid to the English in the course of the war.

70. Though thus severely disabled, Típú was not rendered completely powerless. He lost no time in commencing a series of intrigues with the view of engaging to his side those who had been the allies of the English, and even despatched an embassy to Paris asking for the assistance of the French. His overtures being rejected by Louis XVI, he renewed them after the revolution had broken out, and a contingent of ninety-nine men from the Mauritius landed at Mangalore in 1798. The aid thus received was insignificant, but the object of applying for it was manifest, and the Governor-General, Lord Mornington, resolved to act at once rather than wait till Típú had matured his plans. Instructions were despatched for the immediate adoption of such measures as were necessary to place the Madras army on a satisfactory footing, and an alliance was entered into with the Nizám. The object of the Governor-General was to obtain possession of the maritime territory still under Típú, and thus preclude him from communication with the French; and before commencing the war, an opportunity was afforded him of averting it by timely concession. But the efforts at negotiation were ineffectual, and offensive operations were determined on. The army of the Carnatic was placed under the command of General Harris, while another force from Malabar under General Stuart ascended into Coorg early in March 1799. Típú directed his first efforts against this latter army, but was beaten at Siddheswar near Periyapatna, and in the meantime General Harris and the Nizám's troops crossed the Mysore frontier. Típú turned to meet them, and was defeated with severe loss in a general action at Malvalli on the 27th March. He then retired to Seringapatam, and the allies advanced to the siege, which lasted for a month before a practicable breach was made. The assault commenced at one o'clock on the 4th May, and before evening Típú was dead, and the whole town was in the possession of the English. The dynasty of Haidar and Típú having practically come to an end with the fall of the latter, the settlement of the country was effected by the restoration of Mysore proper to the representative of the ancient ruling family whose rights had been usurped by Haidar. The greater part of the remainder was then divided between the English and the Nizám, the districts of Canara, Coimbatore, and Wynaad falling to the share of the former. A portion was also reserved for the Peshwa, with the view to its forming a basis for a new treaty with the Maráthá empire. Arrangements were at the same time made by which Mysore should be precluded from again becoming a great military power, and it was stipulated that the heads of all the passes on the tableland should remain in perpetuity in the hands of the British.

Summary of the accuisitions made in different parts of the Presidency.

71. The military history of the Madras Presidency ceases with the treaty of 1799; all subsequent addition of territory, with one exception, having been peacefully acquired. The following is a brief summary of all the territorial acquisitions made in the south. A trading settlement was established at Masulipatam in 1611, and in 1639 and in 1690 Forts St. George and St. David were built at Madras and Tevanapatam respectively by the permission of the ruling Hindu princes. The fort of Tellicherry in Malabar was similarly established in 1683. The first footing in Tanjore was gained by the cession of Devakóttai in 1749, as a reward for assistance rendered to a successful claimant to the throne. The Nizáms Mirzapha Jang and Salábat Jang had ceded Masulipatam and portions of the Northern Circars to the French; but, on the capture of Masulipatam by the English in 1759, the influence of the French was broken, and the town of Masulipatam and a considerable tract of the surrounding territory was made over to the English. In 1765 sanads

ceding the whole of the Northern Circars were obtained direct from the Padshah of Delhi, but the Madras Government thought it more politic to obtain the consent of the Nizám also, and in 1768 the five Circars of Ellore, Chicacole, Rajahmundry, Mustafanagar, and Murtuzánagar or Guntur were ceded by treaty on the English agreeing to pay an annual subsidy of nine lakhs, or to furnish military assistance when required. The Dutch settlements of Pulicat, Sadras, and Negapatam were annexed in 1781. The earlier wars with Haidar and Típú were concluded with a peace on the basis of mutual restitution of territory, but by the treaty of 1792 the districts of Malabar and Salem and the Dindigul division of Madura were acquired by the English, and on the partition of Típú's territory in 1799 the districts of Canara and Coimbatore fell to the share of the British Government. During the wars of the eighteenth century the English more than once interfered in the disputes between the Rájá of Tanjore and the Nawáb of the Carnatic, and in 1778 a treaty was concluded by which Nagore and 277 villages were ceded to the Company. The internal affairs of the Tanjore kingdom continued to proceed from bad to worse, and after a turbulent period of disputed succession the rightful claimant to the throne, on being put into power in 1799, executed a treaty resigning the administration of the kingdom into the hands of the British, on the understanding that he would receive a provision of one lakh of pagodas and one-fifth of the net revenues. The titular dignity became extinct in 1855 through failure of male heirs. In 1800 a new treaty was entered into with the Nizám of the Deccan, by which a considerable increase was made in the British Subsidiary Force, on account of which the Nizám ceded all the territories he had acquired by the Mysore treaties of 1792 and 1799, together with the taluk of Adóni and all other taluks situated to the south of the rivers Tungabhadra and Kistna. These are known by the name of the Ceded Districts, and comprise the provinces of Bellary, Anantapur and Cuddapah. The English having in all the earlier wars of the peninsula supported the cause of Muhammad Alí, Nawáb of the Carnatic, and having in fact secured him both the original possession of his kingdom and the power of retaining it, the revenues of the Carnatic were looked to for the defrayal of the expenses of the wars, and with this view the present district of Chingleput, then known as the Jágír, was made over to the Company in 1763. This was rented to the Nawáb for some time, but in 1780 the British Government took the management into their own hands. As new wars arose fresh agreements were made, and a series of treaties were executed culminating in that of 1792, three years before the death of Muhammad Alí and the accession of Umdat-ul-Umra, by which the Nawáb agreed to pay a large subsidy, and, in order to secure punctual payment, the English were authorized to collect tribute direct from a large number of the pálegárs or local chiefs. In the event of the balance not being paid, the English were further authorized to assume the management of certain specified districts. In accordance with this treaty, tribute was collected throughout a great part of the Tinnevelly and Madura districts, and in 1795 the Company assumed the entire management of the Ramnad division of the present district of Madura. On the fall of Seringapatam in 1799 it was discovered that both Muhammad Alí and Umdat-ul-Umra had been carrying on a treasonable correspondence with Mysore, and the treaty of 1792 having thus been infringed, the British Government resolved to assume the entire management of the Carnatic, and proposed a treaty for the purpose. Umdat-ul-Umra having died before arrangements were concluded, and his reputed son Alí Husain having rejected the terms offered him, another grandson of Muhammad Alí named Azím-ud-Daula, was declared his successor, and an arrangement was entered into on the 31st July 1801, by which he resigned the government of the country into the hands of the British, retaining the titular dignity and receiving a liberal stipend. The effect of this treaty was to bring under British rule the whole of the country from the Northern Circars to Cape Comorin, with the exception of the French settlements of Pondicherry and Kárikál and the Danish settlement of Tranquebar. The titular dignity of Nawáb of the Carnatic was continued until 1855, when there was a failure of direct heirs. The present representative of the family bears the title of Prince of Arcot, and has the position of the first native nobleman of Madras. In 1838 internal mismanagement and suspicion of treasonable intrigue on the part of the Nawáb of Kurnool led to the occupation of his territory by an armed force and to its subsequent annexation. Tranquebar was ceded by the Danes in 1845. The district of North

Canara was transferred from this Presidency to the Bombay Presidency in 1862.

Recent events.

72. Since the beginning of the nineteenth century, Madras has known no regular war; but occasional disturbances have called for measures of military repression. The pálegárs or local chieftains in the south long adhered to their independence after their country was ceded to the British. On the west coast, the feudal aristocracy of the Náyars and the religious fanaticism of the Máppillas have more than once led to rebellion and bloodshed. In the extreme north, the wild tribes occupying the hills of Ganjám and Vizagapatam have only lately learned the habit of subordination. In 1836, the zamíndárí of Gumsúr in this remote tract was attached by Government for the rebellious conduct of its chief. An inquiry then instituted revealed the wide prevalence among the tribe of Khonds of human sacrifice, under the name of meriah. The practice was subsequently suppressed by a special agency. As lately as 1879 the country round Rampa on the northern frontier was the scene of riots sufficiently serious to lead to the necessity of calling out troops. The same necessity arose three years later when the Hindus and Muhammadans of Salem came into collision in connection with a question of religious ceremonial. A more serious disturbance was that known as the "Anti-Shanar riots" of 1899. The Maravars of Tinnevelly and parts of Madura, resenting the pretensions of the Shanars—a toddy-drawing caste—to a higher social and religious status, organised attacks on Shanar villages. The town of Sivakasi was looted and burnt by five thousand Maravars. Quiet was restored by the Military, and a punitive police force has been stationed in the area of disturbance.

FORM OF ADMINISTRATION

The Governor in Council.

3 & 4 Will. 4, c. 85, ss. 56, 57. India Act X of 1897, s. 3, (29). 33 Geo. 3, c. 52, s. 25; 53 Geo. 3, c. 155, s. 82. 33 Geo. 3, c. 52, s. 33. 21 & 22 Vic., c. 106, s. 29; 32 & 33 Vic., c. 97, s. 8. 3 & 4 Will. 4, c. 85, s. 79. 24 & 25 Vic., c. 67, s. 26. 3 & 4 Will. 4, c. 85, ss. 61, 63.

24 & 25 Vic., c. 67, s. 27.

24 & 25 Vic., c. 67, s. 28. 33 Geo. 3, c. 52, ss. 47, 48.

73. The executive civil government of the Madras Presidency is administered by "the Governor in Council," subject to the superintendence and control of the Governor General in Council. By the term "Local Government" is meant the Governor in Council. The council includes the Governor and two ordinary Civil Members, who must be members of the Indian Civil Service who have served for ten years in India; the Commander-in-Chief in India is a Member of Council if and while he is resident at the Presidency of Fort St. George. The Governor and the ordinary Members of Council are appointed by the Crown. The terms for which they may hold office are not limited by any legal enactment, but any Governor or Member of Council who returns to Europe or leaves India with intent to return to Europe is considered to have resigned his office. The Secretary of State has directed that a Member of Council should hold office for five years exclusive of any time during which he draws less than full pay, not having himself been granted leave. The Governor in Council may grant an ordinary Member of Council leave of absence, under medical certificate, for a period not exceeding six months. On the occurrence of a vacancy in the office of Governor, the Secretary of State may make a provisional appointment, subject to the approval of the Crown; if the vacancy occurs when no provisional or other successor is on the spot, the senior Civil Member of Council assumes office as acting Governor. If a vacancy occurs in the office of ordinary Member of Council, when there is no person present who has been duly appointed to hold the vacant office as a permanent or provisional Member, it may be filled by the Governor in Council by the appointment as temporary Member of any person qualified for appointment as an ordinary Member. The Governor can issue orders regulating the conduct of business in the Council. The Governor can in the circumstances stated in 33 Geo. 3, c. 52, sec. 47, issue orders which are not in consonance with the opinions expressed by the majority of his Council. The Governor in Council is not empowered to declare war or to make treaties and has no immediate control over the military administration of the Presidency. He corresponds directly with the Secretary of State except in certain cases. The powers of the Governor are not affected by the presence of the Governor General in the Presidency. The Governor in Council is empowered to undertake works of public utility which are not expected to cost more than ten lakhs and are not railways. The Governor in Council possesses all the civil patronage of the Presidency which is not retained by the Secretary of State or delegated to subordinate members of the administration. The Governor makes official tours from time to time in order to acquire personally accurate knowledge regarding the people and country under his government. Despatches to the Secretary of State are signed by all the members of council, but letters addressed to the Government of India and all orders of the Governor in Council are signed by an officer of the Secretariat. Similarly all correspondence regarding public business reaches Government through the Secretariat.

The Legislative Council.

74. The Legislative Council is fully dealt with in chapter III.

The Provincial contract or settlement.

75. Receipts and expenditure of all kinds are classified under three main heads, Imperial, Provincial and Local. When revenue derived from special sources is devoted to special objects and not to the general purposes of the administration, whether Imperial or Provincial, the revenue so devoted forms a "Local fund." Certain local funds are incorporated with the public accounts; these include the receipts of local boards, the irrigation cess fund, the village service fund and the Bhadrachalam road fund; other local funds, including among others cantonment, municipal, port and endowment funds, are designated "excluded," as they are not incorporated with the public accounts. All revenue, which is not included in a Local fund, is credited to Imperial or Provincial funds in accordance with the terms of the provincial "contract" or "settlement." These contracts were the outcome of Lord Mayo's decentralization scheme (1871), by which the control of some departments was delegated to Local Governments. The receipts relating to certain departments or a fixed proportion of them are credited to Provincial funds and an assignment is, if necessary, made from the Imperial funds to enable the Provincial Government to meet the expenses of the departments or their share of those expenses. The main objects with which this system was introduced were to obviate the difficulties which the Supreme Government found in distributing the available

resources among the several provinces, to compel the Provincial Governments to give due weight to fiscal considerations in proposing and carrying out administrative reforms, to encourage the exercise of economy by Provincial Governments by leaving them during the currency of a contract to provide from the surpluses, which they may accumulate, any excess of actual expenditure over actual revenue under Provincial heads, to allow Provincial Governments to reap the benefits of careful administration leading to increased revenue at least during the continuance of each contract, and to enable the Imperial Government to replenish its own exchequer or that of any Provincial Government, when it has been depleted on account of exceptional circumstances. The Local Government should, under ordinary circumstances, maintain a balance of not less than 20 lakhs of rupees to meet the necessities of famine, and this balance should be promptly restored when it has had to be diminished on account of stress of circumstances. The present contract came into force on 1st April 1897 and should have expired on 31st March 1902; as, however, the circumstances of the years during which it was current were abnormal and the Government of India are engaged in considering certain proposals as to the general character of the Provincial settlements in future, the current settlement will remain in force till 31st March 1904. Under it the revenue credited to Provincial funds includes the whole revenue derived from interest on Provincial loans and advances, law and justice—courts of law and jails, police, marine, education, medical, scientific and other minor departments, irrigation—minor works and navigation, civil works, district post, and contributions, and that derived from certain minor heads included under salt, customs, receipts in aid of superannuation, etc., stationery and printing and from miscellaneous and extraordinary items not exceeding Rs. 10,000 except a few minor heads; three-fourths of the revenue derived from stamps; half the revenue derived from assessed taxes, forest and registration; a quarter of that derived from excise and land-revenue. The last item is the principal source of revenue, its estimated annual yield to Provincial funds, according to the contract of 1897, being Rl.* 134·58 out of a total estimated revenue of Rl. 296·41 from all these sources. On the other hand, the Provincial Government was made responsible for the whole expenditure on land-revenue, excise licensees' work in the salt department, customs, interest on the Provincial advance and loan account, district post establishment, general administration (except account office—Imperial branch, currency department, reserve treasury and allowances to Presidency banks), law and justice—courts of law and jails, police, marine, education, medical, political (except "refugees and state prisoners" and "miscellaneous"), scientific and other minor departments (except a few items), certain minor heads under superannuation allowances and pensions, stationery and printing (except stationery purchased for the central stores), miscellaneous (including certain minor heads and items not exceeding Rs. 10,000), famine relief, minor works and navigation, civil works (except buildings for post and telegraph offices, for the Salt department, Meteorological buildings at Kodaikanal and special coal or petroleum explorations) and contributions; for three-fourths of the expenditure on stamps; for half the expenditure on assessed taxes, forests and registration; and for one-fourth of that on excise and salt (except excise licensees' works and salt purchase and freight). According to the contract estimate of 1897, the total estimated receipts and expenditure on account of Provincial funds were Rl. 296·41 and Rl. 312·87, leaving an estimated annual deficit of Rl. 16·46, which was balanced by the fixed assignment from Imperial to Provincial funds under the settlement.

Sources of Revenue.

76. The principal sources of revenue and the objects on which Provincial and Local funds are expended can be learnt from an examination of the provincial accounts in any recent year. The total revenue (excluding opening balances) received during the financial year, 1st April 1901 to 31st March 1902, amounted to Rl. 1,505·66, of which the amounts credited to Imperial, Provincial and Incorporated Local funds were respectively Rl 983·78, Rl. 378·55 and Rl. 143·33. The amounts expended from Provincial and Incorporated Local funds were Rl. 337·80 and Rl. 135·98, leaving surpluses of Rl. 40·75 and Rl. 7·35 respectively. More than a third of the total revenue and more than half the provincial revenue were, derived from land-revenue which amounted to Rl. 587·40 (Rl. 358·42 Imperial,

* For the sake of brevity, the letters "Rl." are used to indicate lakhs of rupees.

Rl. 201·14 Provincial and Rl. 27·84 Local); the expenditure on land-revenue amounted to Rl. 103·21 (Rl. 52·86 Provincial and Rl. 50·35 Local). The next most productive source of revenue was salt, which yielded Rl. 191·54, of which only Rl. 1·03 were credited to Provincial funds; the expenditure under the head 'salt' amounted to Rl. 20·34, of which Rl. 3·94 were debited to Provincial funds. Other important items of revenue were excise (Rl. 143·08), provincial rates (Rl. 87·49 credited entirely to Local funds), stamps (Rl. 86·89), customs (Rl. 46·88, of which Rl. 0·94 only were credited to Provincial funds), tributes (Rl. 45·08 credited entirely to Imperial funds), assessed taxes (Rl. 28·68), forests (Rl. 25·43), registration (Rl. 14·50) and civil works (Rl. 13·74, of which Rl. 11·88 were credited to Local funds and Rl. 1·86 to Provincial funds).

Expenditure.

77. The principal items of expenditure were land-revenue (Rl. 103·21), public works charges, ordinary branches (Rl. 59·37, of which Rl. 58·20 were debited to Provincial funds and Rl. 0·37 to Local funds), police (Rl. 47·81), courts of law (Rl. 47·73), civil works not under the Public Works department (Rl. 45·94, of which Rl. 43·06 were debited to Local funds and Rl. 2·88 to Provincial funds), medical (Rl. 29·31, of which Rl. 16·29 were paid from Local funds and Rl. 13·02 from Provincial funds), education (Rl. 28·70, of which Rl. 18·26 were debited to Provincial funds and Rl. 10·44 to Local funds), salt (Rl. 20·34), forests (Rl. 16·43), general administration (Rl. 16·25, of which the amounts debited to Imperial, Provincial and Local funds were Rl. 2·83, Rl. 10·27 and Rl. 3·15 respectively) and jails (Rl. 13·76). The minor items included Rl. 4·92 spent on railways from Local funds. The net expenditure on education and medical were Rl. 24·03 and Rl. 27·54 respectively.

Financial Powers of the Local Government.

78. The control of the Local Government over the funds at their disposal is limited by certain rules, in which it is laid down that the sanction of the Secretary of State or of the Governor General in Council, as the case may be, is necessary before expenditure can be incurred on certain accounts. Thus the sanction of the Secretary of State is necessary for the creation of a permanent appointment, of which the salary exceeds Rs. 3,000 a year; for the creation of a temporary appointment or for the appointment of an officer on deputation on a similar rate of salary, when it is expected to last for more than 12 months; for the raising of the salary of an officer or of a sanctioned appointment to an amount in excess of Rs. 5,000 a year; and for revisions of establishment which involve additional expenditure of more than Rs. 25,000 a year. The Local Government cannot sanction, without the previous consent of the Government of India, any charges of a permanent nature to be paid from Imperial funds or any charge involving a debit against the following year's grant. Without the previous sanction of the Government of India, no additional taxation may be imposed, no change may be made in any existing system of revenue management, no permanent appointment may be created with a pay of more than Rs. 250 a month, no addition may be made to the pay and allowances of any officer if they exceed or would, after the addition, exceed Rs. 250 a month, no such appointment may be abolished or its pay and allowances reduced, no temporary appointment or deputation involving the payment of more than Rs. 250 a month may be sanctioned for a period exceeding six months, no class or grade of officers may be created or abolished or their pay raised or reduced, etc. It is the duty of the Accountant General to advise the Local Government if he is of opinion that they have exceeded their financial powers. Certain minor powers have been delegated to heads of departments and other officers.

Petitions.

79. The recognized privilege, under which a person aggrieved with the action of any Government official may ordinarily appeal to the next higher authority by means of a petition and receive back a written reply, either refusing or promising redress, is of much importance in all branches of the administration, but especially in matters dealing with the land-revenue, owing to the number of small holdings of land under the ryotwári tenure and the consequent multiplication of details in the administration of the land-revenue. An aggrieved person may generally appeal in succession to the officers representing each grade in the department concerned, and may finally address in turn the Local Government, the Government of India, and the Secretary of State. The three last-named authorities have prescribed certain rules to check the indiscriminate presentation of petitions; in some cases a period is fixed within which the appeal must be filed, but there is, in general, no check

except where a legal enactment or regulation provides for the appeal and imposes limits on its presentation. The Government do not act as a channel of communication for memorials addressed to Parliament.

The Civil Service.

The Indian Civil Service.

80. Candidates are admitted annually to the Indian Civil Service on the results of a competitive examination held in England. Besides two ordinary Members of Council and some of the Judges of the High Court, officers holding certain appointments must by statute be members of the Indian Civil Service; these include some of the Secretaries and Under Secretaries to Government, Members of the Board of Revenue, Secretaries to the Board of Revenue, District and Sessions Judges, District Collectors and Magistrates, Sub-Collectors and Joint Magistrates, and Assistant Collectors and Magistrates. Under special circumstances, however, a person may be appointed to one of these offices, if he has resided for at least seven years in India; if the appointment is in the Revenue or Judicial department, he must pass an examination in the vernacular language of the district, in which he is to be employed, when such examination is required, and be subject to all the departmental tests and other qualifications and restrictions imposed in like cases on officers in the Indian Civil Service; if any such appointment is made by an authority in India it is provisional until it is approved by the Secretary of State in Council. The *cadre* of the Indian Civil Service includes however certain other appointments, such as those of the Resident, Travancore and Cochin, the Director of Public Instruction, the Inspectors General of Police and Prisons, the Registrar of the High Court, Appellate Side, the Private Secretary to His Excellency the Governor, a Deputy Commissioner of the Salt, Abkári and Separate Revenue department, etc., but these appointments are not always held by members of the Indian Civil Service. Other special appointments, such as those of Special Settlement Officers, Census Superintendent, etc., are usually held by members of the Indian Civil Service. With a view to give additional facilities for the employment of natives of India, of proved merit and ability, in the civil service, it was enacted that natives of India may, subject to certain rules, be appointed even to posts reserved by statute for the Indian Civil Service; for the purposes of this statute natives of India include only persons born and domiciled within the dominions of His Majesty in India of parents habitually resident in India and not established there for temporary purposes only. Between 1880 and 1890 ten natives of India were selected for employment in posts usually reserved for the Indian Civil Service and were called Statutory Civilians. In nominating persons for approval by the Governor General in Council, the Local Government at first considered only their abilities, education, status and general fitness, but later the results of a competitive examination were also taken into consideration. After the Public Service Commission had submitted their proposals in regard to the judicial and executive branches of the administration, the Provincial Civil Service was constituted in 1892 and the Statutory Civil Service was abolished, the Statutory Civilian recruited in 1890 having been admitted to service on the understanding that he would be included in the Provincial Civil Service on its creation and the other Statutory Civilians being allowed their choice of joining the Provincial Service or retaining the positions which they then occupied. At the same time certain appointments usually held by members of the Indian Civil Service were declared to be open to members of the Provincial Service. They include now two appointments as District Collector and Magistrate, four as District Judge, one as Secretary to the Board of Revenue, one as Under Secretary to Government, two as Sub-Collector and Joint Magistrate, four as Head Assistant Collector and Magistrate and one as Assistant Collector and Magistrate. It was decided that the last seven posts should, as they became available for the Provincial Civil Service, be added to the existing grades of that service. Up to date one post of Sub-Collector and Joint Magistrate, the four posts of Head Assistant Collector and Magistrate and the post of Assistant Collector and Magistrate have been so added. The Provincial Civil Service consists of two branches: the Executive branch includes appointments of Deputy Collectors and Magistrates, and the third and fourth Presidency Magistrates; the Judicial branch includes appointments of Subordinate Judges and District Munsifs. There are six grades of Deputy Collectors, their pay varying from Rs. 250 to Rs. 700. The pay of the four grades of District Munsifs and three grades of Subordinate Judges varies from Rs. 200 to Rs. 800. Vacancies in the list of Deputy Collectors are filled mainly by selection from the subordinate service of persons who have passed the examinations prescribed for

21 & 22 Vic., c. 106, s. 32.

24 & 25 Vic., c. 54, s. 2 and Schedule, 24 & 25 Vic., c. 104, s. 2.

33 & 34 Vic., c. 3, s. 6.

Statutory Civilians.

The Provincial Civil Service.

those posts and from persons of proved merit and ability whether they are in the service of Government or not; one appointment is, however, made annually on the results of a competitive examination. District Munsifs, who are appointed by the High Court, are usually selected from vakils of the High Court and from persons employed in the Judicial department who have passed the prescribed tests. Government reserve to themselves the right to make promotions to the superior grades of the Provincial Civil Service carrying salaries of Rs. 500 per mensem and above without reference to any claim of seniority.

Other Imperial Services.

81. Besides the Indian Civil Service, the Imperial services of the Public Works and Forest departments are recruited in England, the officers undergoing training in Cooper's Hill College before proceeding to India. The superior officers of the Police department are generally recruited by competitive examination in England.

Admission to service in India.

82. Admission to Government service in this Presidency is not as a rule dependent on success in a competitive examination, but no person can in general be appointed to a particular post unless he has passed certain prescribed examinations—public or departmental or both. An outline of the system under which these educational qualifications are determined will be found in paragraphs 46 and 47 of chapter VII.

Gazetted and non-Gazetted Officers.

83. It does not follow that, because an officer is not appointed by Government and his appointment is therefore not gazetted in Part I of the *Fort St. George Gazette*, that he is not a gazetted officer; for instance, the appointments of District Munsifs, who are gazetted officers appointed by the High Court, are published in Part II of the Gazette. With this exception, however, officers whose appointments are now notified in Part I of the *Fort St. George Gazette* are generally gazetted officers and all other officers are non-gazetted. Certain other events in the service of gazetted officers, such as the grant of privilege leave to divisional officers by the Board of Revenue, are notified in Part II of the Gazette. On the other hand, events in the service of non-gazetted officers are occasionally published in Part I; for instance, the investitures of Tahsildars and Deputy Tahsildars and Sub-Magistrates with magisterial powers, which are granted by Government, are notified in Part I of the Gazette.

The Secretariat.

84. There are six Secretaries to Government. The Chief Secretary who is assisted by an Under Secretary, two uncovenanted Assistants and a Registrar, deals with the correspondence relating to the financial, judicial, public, political, ecclesiastical, marine and pension departments. The Secretary to Government, Revenue department, who has a similar establishment under him, deals with the administration of the land-revenue, customs, abkári, salt, income-tax and other "separate" revenue, and of agriculture and connected subjects. The Secretary to Government, Local and Municipal department, under whom is an Assistant Secretary, who works also under the Chief Secretary in certain departments, and two uncovenanted Assistants, has charge of the correspondence relating to the educational, legislative and local and municipal departments. The Secretary to Government, Public Works department, deals with all the correspondence relating to that department except the irrigation and railway branches, in the latter of which there is a separate Secretary to Government and in the former a Joint Secretary. There are two Under Secretaries in the Public Works department—one for the general department and the other for the irrigation branch—and two uncovenanted Assistants. The Secretaries and Under Secretaries except those in the Marine and Public Works departments must by statute be officers of the Indian Civil Service; one post as Under Secretary has, however, been declared open to members of the Provincial Civil Service.

24 and 25 Vic., c. 54.

Political.

85. One officer is appointed as Resident of the two native States of Travancore and Cochin; he has under him an Assistant Resident. The Collectors of Trichinopoly, Bellary and Kurnool are *ex-officio* Political Agents for the native States of Pudukkóttai, Sandur and Banganapalle respectively, and the Collectors of South Arcot, Tanjore, Malabar and Gódávari are *ex-officio* Political Agents for the French Settlements of Pondicherry, Kárikál, Máhe, and Yanam. A Consul is appointed for Pondicherry and Kárikál. The Paymaster of Carnatic stipends is also under the Political department of Government. Officers in the service of Government are occasionally employed in native States with the sanction of Government.

86. For purposes of general administration the Presidency is divided into 22 districts under the executive administration of a District Collector and Magistrate, who is generally a member of the Indian Civil Service. Each district—with the exception of Madras—contains two or more divisions; a division again comprises one or more taluks, each of which is under the jurisdiction of a Tahsildar. Further details regarding the civil divisions of the Presidency will be found in paragraphs 215 to 230. Some of the Divisional officers are members of the Indian Civil Service; the majority are, however, Deputy Collectors, who are members of the Provincial Civil Service. The Collectors as Revenue officers are subject directly to the control of the Board of Revenue which consists of four members of the Indian Civil Service. There are no officers corresponding to Commissioners of Divisions in other provinces who have charge of a number of districts. The revenue jurisdiction of each member of the Board of Revenue extends over the whole Presidency, and the work of the Board is distributed among the members under Madras Act I of 1894. But orders on important matters are passed by the full Board. Two members of the Board are Commissioners of Land Revenue; one is Commissioner of Salt, Abkári and Separate Revenue; and one is Director of the Department of Land Records and Agriculture and Commissioner of Revenue Settlement. Under this member are a Deputy Director of the Department of Land Records and Agriculture, a Secretary, four Deputy Commissioners of Revenue Settlement in charge of Settlement Parties and two Assistant Commissioners. The Revenue Survey is under a Superintendent with three Deputy Superintendents and twelve Assistant Superintendents. The systems of Survey and Settlements are explained in paragraphs 142 to 214.

Administration of the land.

The Board of Revenue.

Agriculture and Settlement.

Survey. *Madras Act IV of 1887.*

87. The Board of Revenue is the Court of Wards; the Court is subject to the Local Government, and Collectors are subject to the Court, the powers of the Court being locally exercised through the District Collector. A proprietor—that is, a person who owns or has a life-interest in land either solely or as a co-sharer—is deemed to be disqualified for the management of his property if he is a minor, or is a woman declared by the Local Government to be incapable of managing her property, or has been adjudged by a competent civil court to be of unsound mind and incapable of managing his property or has been declared by the Local Government to be incapable of managing his property owing to any physical or mental defect or infirmity rendering him unfit to manage his property. A proprietor *sui juris* may, on his own application, have his estate taken under the management of the Court, if the Government deems it to be in the public interest that it should be so managed. The Court may take under its superintendence the person or the property of a disqualified proprietor or both or the property of a proprietor who has applied to have his property placed under the superintendence of the Court. When the Court assumes the superintendence of a ward's property, the District Collector takes possession of the property on behalf of the Court. In the case of an incumbered estate, if the property is in the possession of a mortgagee or of any person claiming under a mortgagee, the Local Government may, in certain circumstances, require the encumbrancer to deliver up possession of the estate to the manager appointed by the Court. The Court may also in certain circumstances retain management after the proprietor's disqualification has ceased until it is satisfied that he will be thereafter competent to take charge of his estate and administer his own affairs. A small school for the education of minor wards at Madras is controlled by the Court.

The Court of Wards. *Madras Act I of 1902.*

88. The administration of the scheduled districts—the agency tracts in Ganjám, Vizagapatam and Gódávari and the Laccadive islands (including Minicoy)—differs considerably from that of the remainder of the Presidency. The administration of civil justice as well as that of criminal justice and the collection and superintendence of the revenues is vested in the Collector in his capacity as Agent to the Governor. From a decree passed by the Agent in Ganjám or Vizagapatam in a suit, wherein the landed possession of a Zamindar, Bissoye or other feudal hill chief may have formed the subject of litigation, an appeal lies to the Governor in Council and not to the High Court. Many legal enactments; which are in force elsewhere, have not been extended to the scheduled districts. The Governor in Council may declare what enactments are actually in force or that any enactment is not actually in force in any of the scheduled districts or any part of a scheduled district. Lists of

Scheduled Districts. *Madras Act XXIV of 1839. India Act XIV of 1874.*

enactments so notified by the Governor in Council and the rules for the guidance of the Agents to the Governor in the Ganjám, Vizagapatam and Gódávari districts will be found at the end of volume II of the Madras Code.

Administration of Criminal Law.

Criminal Courts.

The High Court.

24 & 25 Vic., c. 104, s. 2.

89. The superior court for civil and criminal judicial work is the High Court at the Presidency of Madras. The High Court may consist of a Chief Justice and as many Judges, not exceeding fifteen, as His Majesty may from time to time think fit and appoint; at present there are five puisne Judges in addition to the Chief Justice. The Judges must be barristers of five years' standing or members of the Indian Civil Service of ten years' standing, who have exercised the powers of a District Judge or like powers for at least three years, or persons who have held judicial office not inferior to that of a Judge of a Small Cause Court for five years or pleaders of the High Court of ten years' standing; one-third of the Judges, including the Chief Justice, must be barristers and one-third must be members of the Indian Civil Service. A Judge holds office during His Majesty's pleasure but has power to resign. The Governor in Council may make temporary arrangements if a vacancy occurs in the High Court. A High Court Bench may consist of one or more Judges, a Full Bench being a Bench of not less than three of the Judges for the time being present as Judges of the Court. A Bench, which is not a Full Bench but consists of two or more Judges, is called a Division Court. The High Court has framed rules showing what class of work may be disposed of by the various benches; certain matters may be disposed of by a Judge in chambers. A list showing the sittings of the various courts during the following week is published every Friday. For the administration of criminal justice there are 20 Sessions Judges in the mufassal, the High Court being the Sessions Court in the Presidency town. Additional and Assistant Sessions Judges are sometimes appointed to assist courts in which the work is heavy. Sessions are held once a month at the head-quarters of each judge. Magistrates are of three classes—first, second and third. The powers of a first-class magistrate are more extensive than those of a second-class magistrate; for instance, a first-class magistrate can pass a sentence of imprisonment for two years, while the longest terms for which second and third-class magistrates can pass sentences of imprisonment are six months and one month respectively. Village magistrates are not included in these three classes of magistrates; they may try persons charged with petty thefts, when the value of the property stolen does not exceed one rupee, and certain other cases of a trivial nature; they may sentence such persons, if found guilty to be confined in the village choultry for a time not exceeding twelve hours or to be put in the stocks for a time not exceeding six hours. The Collector is always District Magistrate, except in the Presidency town. Divisional-officers are also Sub-Divisional Magistrates. These magistrates generally exercise all the powers of a first-class magistrate as well as certain other special powers. The bulk of the magisterial work, as far as the trial of original cases is concerned, is disposed of by second-class magistrates; in taluks where the work is light the Tahsildar and the Sarishtadar—the head of the taluk office under the Tahsildar—exercise the powers of magistrates, including the power to try cases and to commit accused for trial before the Sessions Court, but in other taluks Stationary Sub-Magistrates are appointed for this purpose. Benches of Magistrates are sometimes appointed in municipalities with summary powers to dispose of petty cases. District Magistrates rarely take cases on their own file. Divisional Magistrates dispose of cases triable by a first-class but not by a second-class magistrate, and of other cases which are of special importance for any reason or in which, on account of the previous history of the accused or the value of property stolen, etc., it is probable that a heavier sentence should be awarded than a Subordinate Magistrate is competent to pronounce. The District and Divisional Magistrates closely supervise the work of Subordinate Magistrates; all judgments pronounced by the latter are perused by the Divisional and District Magistrates except in certain petty cases, the results of which only are reported. The judgments of Divisional Magistrates are perused by District Magistrates and Sessions Judges. District Magistrates and Sessions Judges transmit to the High Court copies of their judgments in certain cases. A military officer is appointed Cantonment Magistrate at St. Thomas' Mount and Pallávaram; in seven other cantonments the station staff officers exercise the powers of a Cantonment Magistrate.

Sessions Courts.

Magistrates.

India Act V of 1898.

Reg. IX of 1816.

Reg. IV of 1821.

90. The head of the Police department is the Inspector General; the Presidency is divided into three circles, each of which is under a Deputy Inspector General of Police. A Superintendent of Police is stationed at the head-quarters of each district, and in many districts there are Assistant District Superintendents, who are subordinate to the Superintendent but have distinct local charges; these officers are generally Europeans recruited by examination in England. Under them are the Inspectors and the subordinate police-establishment. The railways form a separate district for the purposes of the police department, a special force known as Railway police being employed under a Superintendent for the detection of offences on or in connection with railway. A training-school has been established temporarily at Vellore for the training of inspectors and station-house officers. To enable old offenders to be recognized, the finger-prints of all convicts are taken and sent to the Criminal Identification Bureau at Madras. The magistracy exercise a limited control over the work of the police, but have no power to inflict departmental punishments or to interfere directly in the internal administration of the department. The Madras Town Police are administered by the Commissioner and Deputy Commissioner. In each village one or more village watchmen or talayaries are employed; they are under the orders of the village magistrates and are appointed by divisional officers; they are not ordinarily under the control of officers of the Police department, but the Local Government may allow the powers of punishing them usually vested in a divisional officer to be exercised by a Superintendent or Assistant Superintendent of Police in a specified area. Among other duties, they have to patrol the village at night, to carry the village magistrates' reports regarding crimes and criminals to the nearest police station and Sub-Magistrate, to watch the cattle-pounds and to assist in tracing offenders and detecting crime; they have no uniform, but in a few districts they are supplied with badges of office. The Local Government have power to declare an area to be in a disturbed or dangerous state and may then employ any police-force in addition to the ordinary fixed complement to be quartered in the specified area; the cost of the additional police-force is borne by the inhabitants of the area and is apportioned among them by the District Magistrates; but the Local Government may exempt any person or class or section of the inhabitants from liabilities to bear a portion of the cost. Such additional police are commonly spoken of as punitive police. Punitive police are at present (1902) employed in Tinnevelly and Madura districts.

Police. *Madras Act XXIV of 1859.*

Madras Act III of 1888. Village police. *Madras Act III of 1895, s. 26.*

'Punitive' police. *India Act V of 1861 (as amended by India Act VIII of 1895), s. 15.*

91. The Inspector General of Prisons controls the Jail department. There are seven central jails and ten district jails; central jails are jails in which prisoners sentenced to rigorous imprisonment for one year and upwards and prisoners sentenced to transportation are confined; they are also district jails for the districts in which they are situated. These jails are each under a Superintendent, who is in most cases the District Medical officer or Civil Surgeon of the station. The Surgeon General, the Sanitary Commissioner, the Deputy Sanitary Commissioner, Sessions Judges, Presidency Magistrates, District Magistrates, and Sub-Divisional Magistrates are *ex-officio* visitors of jails; Government appoint also non-official visitors. The remission system, under which convicts may earn marks by good conduct, diligence, etc., and marks are forfeited for prison-offences, is in force; in central and district jails 24 marks usually entitle a convict to the remission of one day's imprisonment. Selected convicts may be employed as night watchmen, overseers or warders; convict warders earn monthly gratuities in addition to special grants of marks and have certain other privileges. At the head-quarters of each Sub-Magistrate is a subsidiary jail in which unconvicted prisoners, remanded or under trial, and convicts sentenced to imprisonment for not more than one month are generally confined; these subsidiary jails are superintended by Sub-Magistrates; they are inspected periodically by District and Sub-Divisional Magistrates and by District Medical officers. A reformatory has been established at Chinglepat for the reception of juvenile offenders.

Prisons. *India Act IX of 1894.*

92. To administer civil justice there are 20 District Judges, 14 Subordinate Judges, and 120 District Munsifs. In the Presidency town there are a City Civil Court consisting of one Judge and a Small Cause Court consisting of a Chief Judge and two other Judges. Heads of villages may be appointed village munsifs with power to try petty suits in which the value does not exceed Rs. 20 or, with the written consent of both parties, Rs. 200. Offices at which certain classes of documents can be registered have been established throughout the Presidency. The head of the Registration department under Government is the Inspector

Administration of Civil Law. Civil Courts. *Madras Act I of 1889.* Registration. *India Act III of 1877.*

General of Registration; there are 22 district registrars, one of whom is the personal assistant to the Inspector General, and 405 sub-registrars; these officers are now given pay at fixed rates and obtain no commission on the fees paid for registration of documents in their offices. Twenty Registrars of Assurances in the mufassal have been appointed Assistant Registrars of Joint Stock Companies and nearly 200 Registrars and Sub-Registrars have been appointed notaries public.

India Act VI of 1882. India Act XXVI of 1881.

Local and Municipal Administration.

Madras Act V of 1884 as amended by Madras Act VI of 1900.

District Boards.

93. District and taluk boards have been constituted in every district. The area under a district board is the district excluding all municipalities, and that under a taluk board is usually coterminous with a divisional officer's charge, municipalities being again excluded. A district board consists of a president, who is the Collector of the district, and not less than 24 members, except in the Nilgiri district, where the board may consist of not less than 12 members in addition to the President. Every revenue officer in charge of a division of a district is *ex-officio* a member of the district board; the other members may be either appointed by the Governor in Council or elected by taluk boards or by union panchayats, or by the tax-payers and inhabitants in localities in which no taluk board has authority; but the number of persons appointed by the Governor in Council, who hold salaried offices under Government, together with the *ex-officio* members must not exceed one-fourth of the whole number of members of the board. If the members are partly appointed by election, the number of elected members may, under the law, be three-fourths of the whole number of members.

Taluk Boards.

A taluk board consists of a president, who is the revenue officer in charge of the division, and twelve other members, who are either appointed by the Governor in Council or elected by members of union panchayats or by the tax-payers and inhabitants of the taluk. The Governor in Council may appoint any other member to be president of a district or taluk board instead of the *ex-officio* president or may allow the members of a district or taluk board to elect their president from among their own number. Presidents, vice-presidents and members of local boards, do not ordinarily receive any remuneration as such, but they may be paid reasonable expenses incurred by them in attending meetings of the boards. Presidents are responsible for seeing that the resolutions of their boards are carried out.

Union Panchayats.

Important villages, which are not municipalities, may be declared to be unions, for which panchayats are appointed under the control of the taluk boards. A panchayat consists of five or more members, either appointed by Government or elected by the tax-payers and inhabitants of the union; the headman of each revenue village, any part of which is in a union, is *ex-officio* a member of the panchayat. The chairman is either appointed by Government or elected by the members of the panchayat. The main source of income of district and taluk boards is a tax not exceeding two annas in the rupee on the annual rent value of all occupied lands, in the districts of Malabar, South Canara and the Nilgiris and not exceeding one anna in the rupee on the annual rent value of such land elsewhere. A special tax on lands not exceeding 3 pies in the rupee on the annual rent value of occupied lands may be levied for expenditure on railways. The income of union panchayats is derived chiefly from a tax on houses. Other sources of income of local boards and panchayats include tolls, fees for the use of markets, etc., and various miscellaneous fees. The ordinary duties of local boards are the construction and maintenance of roads, avenues, hospitals, dispensaries, markets, waterworks, wells, drains, latrines, etc., the training and employment of medical practitioners and vaccinators, the supervision of sanitation, the diffusion of education and the establishment and maintenance of relief-works in time of famine or scarcity; and they should also carry out any other measures of local public utility, which are calculated to promote the safety, health, comfort, or convenience of the people. The budgets of local boards require the sanction of the Governor in Council or other person authorized by him for the purpose. District boards employ engineering establishments for the construction and maintenance of the public works vested in or under the control of the district and taluk boards; but Government sometimes permit the services of officers of the Public Works department to be borrowed by local boards in connection with the execution of any special work, which may be considered to be beyond the powers of the district boards' ordinary establishment. The District Medical and Sanitary Officer advises the boards on subjects connected with hospitals and sanitation; he is frequently a member of the district board. The officers of the Educational department advise the boards on educational matters.

Municipal Administration.

Municipal Councils in the mufassal.

Madras Act IV of 1884 as amended by Madras Act III of 1897.

94. Municipal councils carry out the duties of local boards within the municipal limits; the councils are independent of the local boards. A council must consist of not less than twelve members; the revenue officer in charge of the division, in which a municipality is situated, is *ex-officio* a councillor of the municipality; the other councillors are partly appointed by the Governor in Council and partly elected by the tax-payers and inhabitants of the municipality; but all the councillors may be appointed by the Government for three years after the institution of the municipality. The number of officials appointed by Government, together with the *ex-officio* councillor, must not exceed one-fourth of the number of councillors. Under the law three-fourths of the councillors may be elected. The powers of a municipal council are greater than those of a local board. The municipal taxes on buildings and lands may be levied at a rate not exceeding 8½ per cent. on the annual value of the buildings or lands. A municipal council may levy a profession tax, tolls and a tax on vehicles and animals, and, in hill stations only, a tax on domestic male servants. A water and drainage tax may be levied on buildings and lands at a rate not exceeding 8 per cent. of their annual value for expenditure on water or drainage works. Registration of births and deaths is compulsory in municipalities. Vaccination has been made compulsory in all municipalities. In important municipalities paid secretaries are appointed, who relieve the chairmen of many of their duties.

The City of Madras.

Madras Act I of 1884 as amended by Madras Acts VII of 1884 and II of 1892.

95. The municipal affairs of the city of Madras are administered by a commission consisting of a president and 32 other commissioners. The President is a paid officer. The President and at least 8 other commissioners are nominated by Government. The other commissioners may be elected for the several divisions of the city; the city is at present divided into eight divisions for this purpose and three commissioners are returned for each division. The President and eight other commissioners elected by the commission constitute a standing committee for certain purposes. The President is the head of the executive administration under the commission. In the city of Madras taxes are levied which are similar to those levied in mufassal municipalities, but the tax on buildings and lands may amount to ten per cent. of their annual value, the water tax must not exceed four per cent. of the annual value of the buildings and lands in the populous parts of the city and two per cent. generally elsewhere, and no special drainage tax may be levied. A special lighting tax may be levied on buildings and lands at a rate not exceeding two per cent. of their annual value. The President may lease land belonging to the commissioners. A tax may be levied on places used for the sale of spirituous and intoxicating liquors. The three principal officers of the municipality are the Revenue Officer, the Health Officer and the Engineer who are appointed by the Governor in Council; in the event of any epidemic or any unusual mortality prevailing in the city, the Government may appoint a special sanitary officer to investigate its causes and to advise as to the measures to be taken for the removal or abatement of the epidemic or mortality.

Marine.

96. The Marine department includes the Presidency Port Officer and the Deputy Conservator of the Port of Madras, who are officers of the Royal Indian Marine, and fourteen other Port Officers, one of whom is Personal Assistant to the Presidency Port Officer, while the others are stationed at minor ports; the Port Officer at Tuticorin is also Superintendent of Pearl Fisheries.

Civil Veterinary.

97. The Civil Veterinary department is controlled by a Superintendent who is an officer of the Army Veterinary department lent for the purpose. His work is controlled by the Board of Revenue.

Horticulture.

98. Botanic gardens are maintained on the Nilgiri hills under the charge of the curator of the Government Parks and Gardens, Nilgiris.

Cinchona and Quinine.

99. The Government have large cinchona plantations on the Nilgiri hills and a manufactory for the preparation of quinine for cheap distribution in pice-packets among the people at large, as well as for the supply of the public departments. The plantations and the factory are under the Director of Government Cinchona Plantations.

Botany.

100. The Botanical Survey of the Presidency is in charge of a Government Botanist who also deals with all questions of economic botany and allied subjects. His work is under the direct control of the Board of Revenue.

Forests.

101. The Forest department which is maintained for the conservation and exploitation of the Government Forests is controlled by a member of the Board of

Revenue. There are three Conservators of Forests for the Presidency with separate local charges. There are 21 Deputy Conservators, four Assistant Conservators and one supernumerary Extra Deputy Conservator; these with the Conservators constitute the upper controlling staff. The lower controlling staff includes 20 Extra Assistant Conservators. In each district except Madras an Assistant or Deputy Conservator is posted as District Forest officer, who is an assistant to the Collector for the purposes of forestry. There are two District Forest officers in Salem district and two in Coimbatore district; on the other hand, there is only one District Forest officer for the two districts of Tanjore and Trichinopoly. These officers are generally members of the Indian Forest Service recruited in England by competitive examination and trained at Cooper's Hill College before proceeding to India. The lower controlling staff consists generally of members of the Provincial or Madras Forest Service, which can be entered only by persons who have undergone training at the Imperial Forest School at Dehra Dún. Under the controlling staff are the executive staff (rangers, etc.) and the protective staff (foresters, forest guards, etc.). Government may declare any land at their disposal to be reserved forest after due enquiry into and determination of the claims of private persons thereto. An officer specially appointed to conduct such investigation is called a Forest Settlement officer. Pending the completion of the enquiry, the land is declared to be reserved land and the accrual of any fresh private rights over it is barred. Grazing, cultivation, tree-felling, quarrying, hunting, shooting, etc., in reserved forests are prohibited by law except under permits for which fees are usually charged; privileges are, however, granted in special cases to aboriginal tribes habitually dwelling in forests, and in times of famine grazing is permitted in reserved forests free of charge. Conservation and exploitation are carried out in reserved lands in a lesser degree than in reserved forests. In some zamindaris in the Presidency the conservation of the zamindar's forests is secured by rules modelled on those in force in Government reserved lands.

Madras Act V of 1882.

The Public Works department.

102. The Public Works department is responsible for the construction and maintenance of buildings belonging to Government (except certain buildings in charge of the Forest and of the Salt, Abkári, and Separate Revenue departments), lighthouses, navigable canals and irrigation works which are ordinarily capable of irrigating more than 200 acres of land; it does not, as a rule, maintain roads and does not carry out works in certain cantonments, which are under the charge of the Military Works department. Ordinary works connected with the maintenance and improvement of harbours are in charge of officers of the Marine department, but the execution of important works is usually entrusted to the Public Works department. No railways in the Presidency are worked by the State, but the Consulting Engineer for Railways is also Secretary to Government, Public Works department, Railway Branch, and advises Government in matters connected with railways. At the head of the other branches of the Public Works department are two Chief Engineers, of whom one is Chief Engineer and Secretary to Government, Public Works department, and the other is Chief Engineer and Joint Secretary to Government, Public Works department, Irrigation Branch, but the distinction between the irrigation and general branches of the department is maintained only in the Secretariat. There are six Superintending Engineers, each of whom is in charge of one of the territorial circles, into which the Presidency is divided for the purpose. The Consulting Architect to Government ranks according to his departmental grading. The engineer establishment includes also 36 Executive Engineers and the same number of Assistant Engineers. These officers are usually members of the Imperial service which is recruited in England; they undergo training at Cooper's Hill College for three years before joining their appointments in India. Once a year an Assistant Engineer is appointed from among the students of the Madras Engineering College; in the alternate years a subordinate is promoted to that grade; these officers constitute the Provincial service. Temporary establishments are sometimes entertained for special purposes. The accounts of the department are not audited by the Accountant General but by officers of the Imperial Accounts Branch of the Public Works department, the local head of which is the Examiner of Public Works Accounts; the Government treasuries are used as banks by the department, officers being credited with specified amounts to enable them to pay by cheque for the works under their charge.

Financial department.

103. The head of the Financial department under the Local Government is the Accountant General and Commissioner of Paper Currency. He has under him in his office a Deputy Accountant General, three Assistant Accountants General, one

of whom is Inspector of Local Fund Accounts and the other two are in charge of the pay department and of the Currency office respectively. At the head-quarters of each district is a district treasury in direct charge of a Treasury Deputy Collector and at the head-quarters of a taluk is a subordinate treasury in charge of the Tahsildar. A Collector is, however, responsible for the security of the cash balance and stamps in the treasuries in his district. It is the duty of the Collector and his divisional officers to inspect the treasuries periodically.

Salt, Abkári and Separate Revenue.

104. The manufacture and sale of salt and of intoxicating liquors and drugs, including opium, are controlled by the Salt, Abkári and Separate Revenue department. The head of the department is the Commissioner who is a member of the Board of Revenue. There are four Deputy Commissioners, three of whom have charge of territorial divisions—Northern, Southern and Central—while the fourth, who is designated the Abkári Deputy Commissioner, is responsible for the supervision of distilleries. One or two Deputy Commissioners and the Secretary to the Commissioner are usually members of the Indian Civil Service. There are 15 Assistant Commissioners and 81 Inspectors; three of the latter are under the orders of the Abkári Deputy Commissioner. The manufacture of salt is a Government monopoly and one of the principal duties of the officers of the department is the prevention of the unauthorized manufacture of salt. The factories are of two classes: in 'monopoly' factories salt is manufactured by ryots, who are paid for their salt by Government as soon as it is stored, and this salt is again sold by Government usually at fixed rates but occasionally in public auction; in "excise-factories" private persons are permitted not only to carry on the manufacture subject to the conditions of their licenses but also to dispose of their salt to anyone at any rate they please. Salt, which has been sold by Government, and salt, which is the property of licensees or of purchasers from them, may not be removed from the factories until duty at the rate of Rs. 2–8–0 a maund has been paid.

Salt. *Madras Act IV of 1889.*

105. The manufacture and the sale of any intoxicating liquor or drug except under due authority are prohibited by law. In the case of imported liquors, the duties leviable under the tariff for the time being in force are credited to customs, and the excise-revenue therefrom is derived only from licenses for the privilege of vend. The right to vend in taverns licensed for the retail sale of liquor on and off the premises is sold in public auction; in other cases fixed fees are charged for the licenses. A brewer must take out a license and comply with certain rules; duty at the rate of one anna per imperial gallon must be paid on all beer issued from a brewery, unless it is issued to the Commissariat department in the public service.

Madras Act I of 1886. Foreign liquor.

106. The revenue derived from country spirit is levied partly by means of a still-head duty and partly by license fees and the sale of the right to vend liquor; the principal country spirit is arrack distilled from sugarcane or palmyra jaggery or molasses. The "private distillery supply system," which was in force throughout a large part of the Presidency till 31st March 1901, when it was entirely given up, allowed free competition among the distillers, subject only to the payment of the prescribed rate of excise duty and no exclusive privilege of manufacture was granted. Under the "contract distillery system," which is now in force throughout the whole Presidency except in a few isolated tracts of the Ganjám, Vizagapatam, Gódávari, Kistna and Malabar districts where the ordinary renting system is still in force, the exclusive privilege of manufacture and supply of country spirits throughout a district or other specified area is disposed of by tender to the approved individual or firm, who agrees to supply spirits at the lowest rate over and above the still-head duty. The successful tenderer has the monopoly of supply of liquor of his own manufacture to retail vendors within the area of his contract at rates which are fixed by Government, and he must generally establish wholesale depots at convenient places for this purpose; he must also pay the still-head duty at the rate fixed by Government on all liquor so issued; the duty is generally Rs. 4–6–0 per proof-gallon except in Madras town, the Nilgiris and Malabar-Wynaad, where it is equivalent to Rs. 5–10–0 per proof-gallon; the annual fee for a license to establish and maintain a distillery is Rs. 100 and licenses for warehouses are issued free. If a distiller himself establishes a wholesale depot, no fee is charged; but to facilitate the supply of spirits to retail vendors in tracts, which are within easy reach of neither a distillery nor a warehouse, licenses are issued to persons who are not distillers on payment of a fee of Rs. 15 for the wholesale vend of country spirits, the licensees being allowed to sell only to licensed arrack-vend-renters, other wholesale

Country spirit.

Private distillery supply system.

Contract distillery system.

depot-keepers and independent arrack-shopkeepers in the districts or other tracts to which the license applies. The manufacture is separated from the sale of the liquor. The right of retail vend of country spirits is sold annually in public auction either by separate shops or by fixed areas, such as Revenue Inspectors' ranges. In the latter case, the vend-renter may open a certain number of sanctioned shops for which he may select his own shopkeepers; this system is in force only in portions of the northern circars. The rates of still-head duty are fixed by the Governor in Council and may vary from year to year. Liquor may be issued and sold only at certain specified strengths, viz., 20°, 30° or 60° under proof, except near the Pondicherry frontier, where liquor of strength 40° under proof may be sold. Under the "ordinary renting system" no attempt is made to concentrate manufacture in distilleries or to levy a still-head duty. The exclusive privilege of manufacture and sale is disposed of in public auction by the taluk or by the Revenue Inspectors' range or other convenient unit. The number of stills is limited as far as possible and the number and sites of shops are previously fixed; tree-tax is paid on the trees from which toddy required for distillation is drawn; shopkeepers are required, as in distillery tracts, to sell their liquor at specified strengths. This system has been entirely abandoned when circumstances have permitted the introduction of the contract distillery system.

Ordinary renting system.

Toddy.

107. Unfermented or "sweet" toddy—the sap of a cocoanut, sago, palmyra, date or dadasal palm—is not subject to any taxation, but it must be drawn in pots freshly coated internally with lime to prevent fermentation. Fermented toddy is taxed by means of rents payable for the right of retail vend and also, throughout the greater part of the Presidency, by means of the tree-tax system, under which a fixed fee is charged for every tree, from which it is intended to draw fermented toddy. In Madras Town Circle the right of retail vend is granted on payment of fixed fees; elsewhere the right is sold in public auction. Under the tree-tax system, no palm tree may be tapped for the purpose of producing fermented toddy without a license, upon issue of which the tree is given a distinguishing mark. The fees for licenses to tap cocoanut palms and sago palms are Rs. 2-4-0 and Rs. 4-8-0 a tree for each half-year and the fee for a license to tap a palmyra or date palm is Rs. 1-8-0 a year; in some districts fees are levied at two-thirds of these rates and in Madras Town Circle special rates are in force.

Tree-tax system.

Opium. *India Act I of 1878.*

108. The cultivation of the poppy is prohibited, and the whole of the opium required for the Presidency is purchased on behalf of Government in Bombay and thence sent to two storehouses, one at Madras and the other at Cocanada in Gódávari district, from which it is issued to licensed wholesale vendors at a price fixed from time to time in such a way as to cover a pass-duty of Rs. 5 per lb., the cost-price and freight to the storehouse. Opium may not be imported by private persons unless it is imported by sea and is required for medicinal purposes only. The privilege of the retail vend of opium and of the manufacture and sale of intoxicating drugs (other than smoking preparations) prepared therefrom is sold in auction either by shops or by vend-areas; shopkeepers must obtain their stock from wholesale vendors who are licensed on payment of Rs. 15.

Ganja, bhang, charas.

109. Licenses for the cultivation of the hemp plant are issued only in the Bapatla taluk of the Kistna district and in the Pólúr taluk of the North Arcot district; elsewhere, except in the hill tracts of the Northern Circars, its cultivation is absolutely prohibited. In tracts where it is licensed, the cultivators are required to convey the produce to public storehouses, whence removals are allowed only on prepayment of excise duty at Rs. 4 per seer of gánja, As. 8 per seer of bhang and Rs. 6 per seer of charas. Licenses for the retail vend of these intoxicating drugs are sold in public auction, and licenses for wholesale depots are also granted on payment of Rs. 15.

Shops.

110. The Collector is responsible for fixing in consultation with the police authorities the number and location of shops for the sale of intoxicating liquors and drugs, but, although "local option" is not in force, representations made by municipal councils, local boards and other public bodies are duly considered in respect of alterations in the number and sites of shops. As far as possible sites of shops are kept at a distance from market-places, bathing-ghâts, schools, hospitals, places of worship, factories and places of public resort.

Income Tax.

111. The assessment and collection of income-tax form part of the ordinary duties of the officers of the Land Revenue department and no special establishment other than clerical is entertained for this purpose.

Stamps.

112. The Collector of Madras is also Superintendent of Stamps and has under him an Assistant Superintendent who is a Deputy Collector.

Customs.

113. The Sea Customs establishments are controlled by the superior officers of the Salt, Abkári and Separate Revenue department. In Madras the Collector is also Collector of Customs; his establishment includes two Assistant Commissioners one for Sea Customs and the other for the compilation of trade statistics.

Registration of Births and Deaths.

114. The registration of births and deaths is compulsory in municipalities and may be made compulsory in rural areas by the Local Government under the Madras Registration of Births and Deaths Act (III of 1899); during the year 1901 this Act was in force in 441 villages. In rural tracts the headmen of villages generally maintain the registers of births and deaths; where registration is not compulsory, the headman has to ascertain by careful enquiries the occurrence of births and deaths. The registers are inspected and checked by officers of the Land Revenue department; but the officer responsible for the compilation of statistics for the whole Presidency is the Sanitary Commissioner. With a view to minimise the loss of life through wild animals, Government offer rewards for the destruction of certain dangerous wild animals.

Emigration.

115. The Collector of Sea Customs, Madras, is Protector of Emigrants and has under him a Medical Inspector of Emigrants.

Administration of Medical Relief. Sanitation and Vaccination.

116. The higher appointments in the Medical department are usually held by commissioned officers of the Indian Medical Service. The head of the department is the Surgeon General with the Government. The branch of the department which deals with sanitation, vaccination and epidemics is superintended by the Sanitary Commissioner. The Deputy Sanitary Commissioner is also Inspector of Vaccination. The Government maintain the General Hospital, the Ophthalmic Hospital and the Maternity Hospital at Madras as well as other civil and police hospitals. The staff of the General Hospital includes the Senior Medical Officer, three surgeons, four physicians and a Resident Medical Officer; the first of these is also Principal of the Medical College and the others, except the Resident Medical Officer, are professors of the College. The Professor of Chemistry is also Chemical Examiner to Government. Four medical officers are stationed in Madras town which is divided for the purpose into four districts; the Presidency surgeon, first district, is Inspector of Emigrants. A District Medical and Sanitary Officer is stationed at the head-quarters of each mufassal district, and Civil Surgeons are stationed in nine other towns. Medical officers receive special fees for inspections of factories and vessels. Three lunatic asylums are maintained by Government. The Sanitary Board report to Government on projects connected with water-supplies, drainage and sanitation and issue type-designs and type-plans of hospitals, markets and similar buildings; a sanitary engineer is employed to investigate and report on sanitary projects. The salaries of officers in the subordinate grades, including hospital assistants, deputy inspectors of vaccination, vaccinators and sanitary inspectors, are paid wholly or mainly by local boards and municipal councils, who maintain hospitals and dispensaries throughout the Presidency.

Scientific departments.

117. Appointments in connection with science include the Superintendent, Government Central Museum, who is also Librarian of the Connemara Public Library and Superintendent of Ethnography for the Madras Presidency, the Superintendent, Archæological Survey and the Epigraphist for the Madras Presidency.

Education. Ecclesiastical Administration.

118. The system of public instruction and the ecclesiastical jurisdiction are fully dealt with in chapters VII and IX.

Stationery.

119. The supply of stationery to all Government offices is controlled by the Superintendent of Stationery, whose duties are performed by the Collector of Madras. In his capacity of Superintendent of Stationery he is under the direct control of the Financial department of Government.

Press.

The printing-work for Government is done at the Government Press and at its branch in the Penitentiary, where prisoners are employed. The Superintendent of the Government Press controls this department. There is a district press at the Collector's head-quarters in each district.

The Collector-Magistrate.

120. It is now possible to indicate in greater detail the duties of the Collector and Magistrate of a district. As District Magistrate, he is primarily responsible for the maintenance of law and order and for the administration of criminal justice by the magistracy within his jurisdiction and for the proper working of the police. As

Collector, it is his duty to see that land-revenue, income-tax, and revenue derived from forests and abkári or excise are duly collected and he is officially responsible for all public money lodged in the district and subordinate treasuries. The maintenance of the numerous land-records by the village officials, the state of the crops, the economic condition of the people and the grant of remissions of land-revenue, when necessary or expedient, demand his constant attention. The forests in his district are under his control and management. He has under him an engineering establishment for the upkeep of the tanks and other irrigation works, which have not sufficient capacity for the irrigation of more than 200 acres of land. He is responsible for the due assessment of all persons in the district whose incomes are such as to render them liable to pay income-tax. He fixes the number and sites of shops for the sale of intoxicating liquors and drugs and it rests with him to accept or reject the bids offered for the rights of vend in such shops or tracts at the annual auctions which are held by his divisional officers. In zamindari tracts his divisional officers decide summary suits regarding the rates at which rent should be paid by tenants to the zamindar and the conditions which may be incorporated in the "patta" or engagement. The Collector is *ex-officio* president of the district local board and as such is largely responsible for the maintenance of roads, the spread of education, the establishment of hospitals and dispensaries, and for sanitation, vaccination, and the public health within his district. He has powers of control over municipal councils and taluk boards. The Collector is also called on to deal with such emergencies as famine—of the approach of which it is his duty to warn the Government—plague, cholera, and the movements of troops. In some cases he holds also other appointments such as political agent to a native State, etc. His multifarious duties necessitate frequent tours of inspection during all seasons of the year. Many of the Collectors' powers and much of his patronage are exercised by his subordinates and much of his time is occupied with the disposal of appeals preferred against the orders of his divisional officers.

The Divisional Officer.

A divisional officer who, if a member of the Indian Civil Service, is usually a Sub-Collector and Joint Magistrate or a Head Assistant Collector and Magistrate, and, if a member of the Provincial Service, is a Deputy Collector and Magistrate, is *ex-officio* member of the district board and president of his taluk board; he is also a member of all municipal councils within his jurisdiction and is not infrequently appointed chairman of a municipal council. He exercises within his division most of the ordinary powers of a Collector, but, with a few exceptions, an appeal lies to the District Collector against his orders. The powers and patronage of a Sub-Collector are somewhat larger than those of other divisional officers. The taluks are divided for revenue purposes into ranges, usually three or four in number; the officer in charge of a range is called a revenue inspector.

The Village Officer.

121. The lowest unit for administrative purposes is the village. In each village is a headman, sometimes called the potail or reddi or monigar or munsif, an accountant, who is generally called the karnam, and a staff of menial servants. These officers, who used to receive no remuneration in money but held certain lands on favourable terms, are now given fixed salaries, the pay of a headman or accountant varying from Rs. 5 to Rs. 20. In some districts these offices are hereditary, but hereditary considerations may be neglected if the candidate for the office of headman or karnam is not educationally or otherwise fit to hold office. The headman is responsible for the collection of revenue and its remittance to the taluk treasury; in his capacity of village magistrate he can try petty cases and must maintain law and order in his village, applying for assistance to higher authorities if necessary and reporting the occurrence of crimes, the movements of criminal gangs, etc., to them; as village munsif he is a petty civil court; he is registrar of births and deaths; it is generally his duty to see that water is duly distributed to irrigable lands from Government tanks, etc. As the immediate representative of the Government he has numerous other duties. The accountant is responsible for the maintenance and custody of the accounts and land-records relating to the village. During the cultivation season he has to record the crop raised in each field, and the area in which it is raised and an estimate of its outturn. He is required to have an elementary knowledge of surveying, sufficient to enable him to survey and plot an ordinary field. He acts as clerk to the headman in his judicial capacity.

CHARACTER OF LAND TENURES.

Introduction.

122. The following are the main varieties of land tenures under the Government: (i) perpetual freeholds held under a title-deed showing proprietorship as against the Government, and paying no land-revenue; (ii) enfranchised inams or grants of land or of the land-revenue thereon held under a title-deed showing proprietorship as against the Government, and paying a quit-rent fixed for ever, calculated at a favourable rate; (iii) zamindaris or landed estates held under a sanad or title-deed showing proprietorship as against the Government, and paying a land-revenue or peshkash fixed in perpetuity; (iv) unsettled palayams or landed estates held without sanads the land-revenue on which may be raised at the pleasure of the Government; (v) individual holdings under what is termed *ryotwari* tenure without a sanad expressly declaring proprietorship, and paying a revenue subject to additions and deductions under certain special circumstances and subject to revision at intervals of thirty years; (vi) inam holdings including *jagirs*, or grants of land or of land-revenue held under a tenure dependent on the fulfilment of certain conditions; (vii) land held on special conditions as (*a*) on improvement leases called *cowles* and (*b*) under the favourable rules for planting *topes* or groves of trees.

Perpetual freeholds.

123. The perpetual freeholds now existing were created under the rules for the redemption of land-revenue and quit-rent on enfranchised inams under the rules in force during the latter half of last century. Under these rules the redemption of land-revenue was permitted in the case of (1) sites of buildings, (2) gardens of limited extent attached thereto, and (3) hill plantations of exotic products, such as tea, coffee, cinchona, &c. The rate of redemption was first fixed at twenty-five times the annual land-revenue but, in 1895, it was raised to twenty-nine times such sum. In zamindaris the registered zamindar alone was given the right to redeem the land-revenue. In the case of ryotwari lands, the ryot holding directly from the Government alone had the right. On payment of the redemption money in full, with the cost of survey and demarcation, the party redeeming the revenue was furnished with a title-deed in a certain prescribed form. The redemption of quit-rent on enfranchised inams introduces the question of the inam tenures of this Presidency, but it is only necessary here to mention that inamdars holding lands enfranchised from service or from resumption by Government, but subject nevertheless to a quit-rent, were allowed until recently to redeem that quit-rent in perpetuity. In the case of the inam title-deeds issued before the 28th February 1895, the sum payable for the redemption of quit-rent was fixed at twenty times the amount, but in the deeds issued after that date, it was stipulated that the quit-rent should be redeemed by thirty years' purchase. Having regard to the disadvantages arising from the capitalization of the State's annual revenue from land, Government decided in 1896 that the redemption of land-revenue should be disallowed except in cases in which it had already pledged themselves to allow it. No absolute freeholds can therefore be now newly acquired in this Presidency. The holders of freeholds have unlimited powers of alienation. The freehold is absolute against that demand of the Government only, which represents the Government's right to share the produce, and gives no immunity from other Government demands, such as for irrigation, roads, sanitation, education and so forth; in all of which cases the land may be subjected to separate cesses or demands. The redemption in no way affects sub-tenures, rights of occupancy, or other similar rights; and the freedom conferred is absolute only as against the Government.

Inams enfranchised, but unredeemed.

124. Holders of enfranchised inams, who, at the time of enfranchisement, were granted the option of redeeming at any time the quit-rent payable on their lands, but have not availed themselves of the concession, have full power of alienation, and pay quit-rent, but are not liable to periodical revision of assessment.

Zamindaris.

125. In the case of zamindaris, the land has been assigned in perpetuity with a proprietary title as against the Government. The land-revenue, technically called "peshkash," is charge on the land. Zamindars hold under a deed termed a "sanad-i-milkeut istimrar" and give in exchange a corresponding kabuliyat or acceptance. An Act has recently been passed provisionally for a period of one year from the 1st June 1902, declaring the impartibility of the ancient zamindaris and also their inalienability except in circumstances where alienation would be permissible by law if the estate were ancestral property and the

proprietor occupied the position of managing member of a joint Hindu family governed by the ordinary law of succession. In the case of zamindaris not brought within the scope of the Act, the proprietors are at liberty to transfer, without the previous consent of the Government, their right in the whole or part, however small, of their zamindaris to any person they please by sale, gift, or otherwise; and such transfers are to be held valid and to be respected by the courts and officers of Government, provided that they are not repugnant to the Muhammadan or Hindu law or to the regulations of the British Government. In order to be valid against the Government, and in order to liberate the transferer from his liability to pay Government dues, such transactions must be first registered in the Collector's office, and where the alienation is of a sub-division of the estate, the peshkash on the sub-divided portion must be determined by the Collector. The Government do not regulate the succession to zamindaris. A zamindar has certain legal powers of distraint for default of payment of rent. The land being "permanently settled," that is to say, the land-revenue on it being fixed for ever, extension of cultivation brings no increase of revenue to the State. The fact that the zamindar has to pay a permanently fixed revenue does not exempt him from liability to general, local and municipal taxes. Zamindars have the power to appoint the village officers employed in the villages of the estate according to a scale approved by the Collector and the Board of Revenue; the power is, however, subject to the veto of the Revenue officer in charge of the division. The power to punish village officers is vested in the Revenue Divisional officer and the District Collector, but zamindars may, if specially empowered by the Board of Revenue, fine the village officers in small amounts. About one-fifth of the whole Presidency is under zamindari tenure.

Palayams or unsettled estates.

126. The palayams for which no sanads have been granted are called unsettled palayams. The important difference between unsettled palayams and zamindaris is that in the case of the former the Government have the power to resume the grant at pleasure or to alter or revise the conditions on which it is held, as for example by revising the amount of revenue paid by the holder.

Ryotwari tenure.

127. The ryotwari system of holding under the Government has now been the principal tenure of this Presidency for over three-quarters of a century. The pattadar or registered holder of land under the ryotwari system is, as regards Government, the responsible proprietor of the land entered against his name in the land register of the village, until they pass from his possession by sale for arrears of revenue or in some other legal manner. A registered pattadar may, so far as Government is concerned, alienate, in any manner he pleases, the whole or any portion of his holding, provided (1) that unless and until such alienation is registered in the village records, the alienor remains liable for the revenue and all other legal charges due on the land just as if no such alienation had occurred, and (ii) that when the alienation is registered, the alienee takes the land subject to payment of any arrears of assessment or other legal charges due on it, and to the same obligations as those under which it was held by the alienor. If a registered pattadar improves his holding by constructing a tank on it or digging a well, he is not chargeable with any additional assessment for such improvements, but he is not entitled to claim, as of right, any reduction of assessment on account of the space occupied by the work. He is bound to pay the assessment fixed on his field or holding whether cultivated waste or fallow in the prescribed instalments, unless it be remitted in accordance with the rules explained in paragraph 210. The assessment is determined under the rules described in paragraphs 194 to 205. The registered pattadar is entitled to work minerals on his land, but is liable to pay therefor a separate assessment in addition to the assessment above referred to which is for surface-cultivation.

Application for land.

128. When there are assessed lands in a village unoccupied, it is open to any individual, whether resident of the village or not, to apply for the land to be held by him under the terms of the ryotwari tenure. Applications by strangers are generally communicated to the villagers so that they may have the option of applying for them, and, save in exceptional circumstances, it is only when they do not agree to take up the lands that strangers are permitted to obtain them. When there are two or more applicants for the same land, preference is ordinarily given to the ryot whose land adjoins, and when there is no such claimant, to the first among the applicants who is a ryot of the village in preference to a stranger.

But, as a general rule, no preferential claim on the ground of possession of the adjoining land, or of land elsewhere in the village, is admitted in favour of a ryot by whose relinquishment the land became unoccupied and available for allotment. In all cases applications for whole survey fields have preference over applications for portions only. The applications are in the first instance disposed of by the Tahsildar. From his decision an appeal lies to the Divisional officer if made within thirty days, and no second appeal is admitted.

Transfer of Registry.

129. Applications for the transfer of registry of pattas are made in the office of the Collector or of some other duly authorized officer. If the application, which should be attested by the village officers, is presented by both the parties or if it is supported by a decree of a civil court evidencing the change of ownership, it is at once complied with. But where only one of the parties makes the application, and produces a duly executed and registered deed evidencing the transfer, notice is given in the District Gazette that the transfer of registry has been applied for and that, unless objection is made within three months of the date of publication of such notice, the transfer will be ordered. If objection is made, an inquiry is held and according to the result, the transfer is ordered or not. If it is ordered a patta is issued in the name of the transferee at the next annual settlement. Meanwhile, as a rule, the new holder gets possession. In the event of the death of a pattadar, executive orders provide that the village officers should take steps to ascertain who is the proper successor. The Collector, when satisfied, causes a patta to be issued in the name of the presumptive heir or heirs, leaving the question of possession and other rights to be decided in case of dispute in the civil courts.

Relinquishment.

130. Ryots are allowed to relinquish their lands provided they apply for permission to relinquish sufficiently early in the season to enable others to commence cultivation upon them. The dates up to which ryots are permitted to relinquish their lands vary in the several districts, so as to follow the first rains in each district. The lands relinquished must be accessible to others, otherwise the relinquishment is not accepted. For instance, a ryot would not be permitted to retain all the fields in his holding except the centre one, as this would not be an eligible holding for another ryot.

West Coast.

131. The tenure of the holders of land directly under Government in the districts of Malabar and South Canara is substantially as above described. It was, however, the practice in Malabar and in the Wynaad to register lands in the names of the occupants and to collect the revenue from the latter ignoring the janmi or the proprietor. The Madras High Court having held in 1889 that this practice was illegal, the janmis are now registered by the Collector and are held responsible for the payment of Government revenue. An Act called the Malabar Land Registration Act was passed in 1896 to enable the Collector to ascertain and register the names of the janmis.

Ordinary inam tenures of land.

132. When the State has given up its right to the land-revenue, or a portion of it, in favour of an individual or an institution, or to remunerate persons for performing certain duties, the grant is termed an *inam* or *manyam*. In 1858 a Commission was established to examine the titles of the possessors of inams, and, of the inams that were confirmed, to continue those that were still required for religious, charitable or village service and to enfranchise those of other descriptions, if the possessors wished, by commuting for a moderate quit-rent the right of the Government to prevent alienation, to resume, or to demand service. Service inams are held revenue free or subject to favourable rates. They cannot be alienated without forfeiture of the favourable tenure. The conditions of the grant must in each case be observed by the holder and the Government claim an absolute right to adjudicate as to the proper fulfilment of those conditions. In the case of village service inams the holders are bound to perform certain administrative duties, and are styled village officers : the succession to these inams is governed by a special enactment, and is hereditary in most districts. The inams attached to the more important village offices have, however, been enfranchised, and the village officers are now remunerated by money salaries.

Lands held on Cowles, &c.

133. A cowle is a grant of land free of assessment for a certain period, or subject to favourable assessment gradually rising to full assessment. Until the full assessment is imposed, the holder is subject to the terms of the contract contained in the cowle. The cowle tenure is usually granted to induce ryots to bring

under cultivation unpromising waste lands. Lands held under the tope rules are of the same nature, their object being to encourage tree planting. The terms of a cowle reserve to Government the power of re-entry on breach of its conditions.

Farming the Revenue.

134. The principle of farming out the land-revenue in certain localities for a certain period has almost disappeared. Some rents, however, still remain in Vizagapatam, Gódávari, Chingleput and Salem districts. The old joint-rent system, where the villagers themselves took up the lease and were jointly and severally responsible, has now entirely disappeared. The last trace of it existed some years ago in the hilly parts of Gódávari district.

Mirasi Rights.

135. The rights which go by the name of *mirasi* must be mentioned here. They are not sufficiently strong to be classed as tenures or rights against the Government, such as zamindari or ryotwari; but they are sometimes more than the mere preferential right to occupy new land and they are recognized by the Government. The only trace that remains now of the special rights of the old communal oligarchies is the claim by certain hereditary mirasidars in Chingleput district to fees upon waste land which may hereafter be brought under cultivation, and upon lands now occupied which may hereafter be relinquished and again re-occupied. These fees were formerly taken from the gross produce before the division of the crop, and were then paid to the mirasidars both by the ryots and by the Government. They are now made payable entirely by the ryots, liberal allowance having been made for them in arriving at the rates of assessment charged on their lands. The fee payable by the ryot under these circumstances is a yearly sum of two annas in each rupee of the Government assessment; this amount being held to represent the old average rate of 3 per cent. of the gross produce of the year. These fees are recorded by the Government in the land-revenue registers, but their collection is left to the mirasidars themselves. The total amount of these fees payable to mirasidars in Chingleput district is very small, but the right is tenaciously held to, and represents what was in former days a highly important institution.

Unassigned Lands.

136. Unassigned land within a Government ryotwari village is either the assessed or unassessed. The mode in which assessed lands are applied for and taken up in the first instance has already been described. The unassessed land of a village is at the disposal of the Government. Subject to the instructions of the Government officers, certain portions are reserved for the gratuitous communal use of the villagers, as the tanks, streets, channels, threshing-floor, burial-grounds, cattle-stands, &c.; while in all villages, except on the West Coast, a house-site and a backyard, with permission to cultivate garden produce in it free of all assessment, are provided gratuitously for each family. The addition to or subtraction from the area of village-site is provided for by fixed rules. The unassessed waste lands of village, which are not yet assigned, and which are not reserved for these or other special purposes are available to ryots for cultivation. Applications for such lands are received by the Tahsildar. If, on enquiry, the Tahsildar finds that the land is not required for Government or communal purposes and that its grant is otherwise unobjectionable, he will submit the application to the Revenue officer in charge of the division, who is authorized to pass orders directing the transfer of the land to the head of "assessed" and its grant on patta to the applicant or its disposal under the rules regulating the grant of assessed lands. In the case of specially valuable unassessed lands, the grant of which on patta is not objectionable, the Collector may order the right of occupying the land to be sold by auction to the highest bidder who will be given a ryotwari patta, the land being transferred from "unassessed" to "assessed."

137. Unassigned lands outside the recognized limits of any village are insignificant on the plains, which are fully occupied by village communities, but they abound on the hill ranges where the indigenous tribes have established only a very partial occupation, and where general occupation is only just springing up. Special rules have therefore been framed for the sale of waste lands on the Nilgiris, in the Wynaad, and on the Shevaroy, Kollimalai, and Yelagiri hills of Salem district. Applications for such lands are received by the Collector. The plot is surveyed and demarcated at the cost of the applicant who is required to deposit the amount in advance. The public is given due notice of the proposed sale of the land and of the date on which it is to be held. If no claims of private proprietorship or exclusive occupancy are preferred in the meantime, the plot is put up to sale on the appointed day at an upset price equal to the cost of survey and demarcation, and the value of the trees standing thereon. The highest bidder above the upset

price gets the land subject to the payment of an annual assessment. In the Nilgiris, excluding the Nilgiri-Wynaad, no assessment is charged till the sixth year on forest or grass land newly taken up under these rules and planted with coffee, tea, cinchona or other special products. In the Wynaad, lands similarly taken up and planted are allowed to be held free of assessment for three complete years.

Tenures other than those under the Government.

138. In a ryotwari country the most important considerations connected with land tenures are those which concern the relations of the Government with persons holding immediately from it. The system of tenancy under such land-holders is however fully developed, registered ryots sub-letting their lands and living on the difference between the rents they obtain and the assessment they pay to the Government. In the districts on the east coast, lands are generally rented out by the land-holders either for a fixed annual payment in money, or for a share in the produce. Ordinarily dry and garden lands are rented for money and irrigated lands for a share in the produce. In the case of permanently-settled estates the Madras High Court has held that a ryot cultivating land therein is *primâ facie* not a mere tenant from year to year, but the owner of the kudivaram or occupancy right in the land he cultivates.

South Canara.

139. On the west coast, tenancies are of a special nature, being more permanent than elsewhere, and the lands being generally leased out for a number of years. In South Canara, tenants are of two kinds, Mulageni and Châlageni. The *Mulagenis* are permanent tenants under the *mulawargdar* or landlord, paying a fixed and invariable rent. These tenancy rights have been for the most part obtained from the landlord as grants in perpetuity on payment of a fine and on condition of paying annually a specified rent. Such tenants cannot be ousted except for non-payment of rent, and even in this case not till they have been fully recompensed by the landlord for the permanent improvements they may have made on the lands. Subject to payment of rent, they are at liberty to sub-rent, mortgage, or in some cases to sell their interest, and are rather a description of subordinate landlords than mere tenants. On failure of heirs the title lapses to the landlord. In granting land on múlageni tenure, conditions are now often imposed which are never found in the ancient deeds, *e.g.*, that on the rent falling into arrears, the trees standing on the land being wilfully destroyed, the lease shall be forfeited. The *châlagenis* are temporary ryots under the múlawargdars or múlagenis; their lease is for a limited term, usually one year, or even at will. In the case of these tenants the landlord has the right to raise the rent or oust the tenants whenever he pleases, when no period is fixed, after however reimbursing him for all permanent improvements made by him. Practically the tenants are seldom ousted unless they are heavily in arrears. In some large estates there is an intermediary tenancy, when the tenants have no written leases, but are in practice treated as múlagenis. The rents of múlagenis and châlagenis are paid either in money or a certain quantity of grain, and never by a share of the crop as in other parts of the Presidency.

Malabar.

140. In Malabar the principal tenures under which lands are held by tenants are Kanam, Panayam, Kulikkanam and Verumpattam. In the first two cases the tenant has some pecuniary interest in the land. In the case of *Kanam* the rent is paid to the janmi (landlord) after allowing the tenant a deduction on account of the interest on the sum advanced and the Government revenue of the land. This agreement generally extends over a period of twelve years, on the expiration of which it may be renewed or revoked. If the deed is renewed, the janmi usually claims a fee or allowance calculated at 20 per cent. or more on the amount originally advanced. The sum so paid is not shown in the deeds, nor is it returned to the tenant at any time. If the janmi desires to resume the land, he has to make over to the tenant the whole of the deposit money and the value of any improvements which may have been effected by the tenant. This cannot be done before the expiration of the term of twelve years. If meanwhile the land deteriorates through the neglect of the tenant, he has to pay compensation to the janmi for the damage thus sustained. In the case of *Panayam*, possession of land is given as security for a certain amount advanced. Rent is paid to the janmi after deducting the interest on the sum advanced at the rate specified in the deed. In some cases, when the deed provides that the mortgagee should pay the Government revenue, a sum on this account is also deducted from the rent payable to the janmi. When there is no period prescribed in the deed, the janmi may whenever he likes take back the land on payment to the mortgagee of the sum advanced. Unoccupied

waste lands are leased on *Kulikhanam* right, generally for twelve years and sometimes for longer periods, for the purpose of raising buildings and plantations thereon; when the land is returned to the janmi on the expiration of the term, the value of improvements made by the tenant is paid to him. In this as well as in the two foregoing cases, the right possessed by the tenants on the lands held by them is transferable. The death of either tenant or landlord does not affect the lease when there are surviving members in the family of either. Another kind of lease called *Verumpattam*, or simple lease, is generally for one year, and sometimes for longer periods, and is terminable according to the terms shown in the deed. A rent, generally two-thirds of the produce of the land, is annually paid by the tenant to the landlord. In the case of leases for longer periods than one year, the landlord receives in advance the rent for a certain period not exceeding one year. The tenant receives no interest for the amount thus advanced, but on the termination of the lease the said amount is either repaid to the tenant or credit given him for the same against the rent due by him. There is also another kind of lease known as *Undarati*, under which the landlord receives in advance the rent for a certain number of years and the land is let out to the tenant for the same period. The tenant has no more payments to make to the landlord. When the period expires, the land is returned to the landlord. This kind of lease is generally applicable to plantations. With a view to check the practice of eviction of tenants in Malabar and to secure to the evicted tenants the full market-value of improvements effected by them an Act was passed in 1887. The language of the Act (I of 1887) however, gave room for diversities of construction and the result was that the object originally contemplated was frustrated in several cases. A new Act (I of 1900) has now taken its place. This has rectified the defects of the old Act not only as regards ambiguous and confusing language but also with regard to the principles to be followed in calculating the amount of compensation payable to the tenants.

Statistics.

141. The following table shows the number of holdings and holders direct under Government, with the area and assessment of the holdings :—

Nature of tenure.		Number of estates.	Number of villages.	Number of holders or share-holders.	Gross area.	Average area of each estate.	Average assessment of each estate.
1		2	3	4	5	6	7
					ACRES.	ACRES.	RS.
1. Zamindaris ...	(*a*) with peshkash exceeding Rs. 50,000	25	10,596	25	8,786,112	351,444	1,35,887
	(*b*) with peshkash exceeding Rs. 5,000 but not Rs. 50,000	103	10,280	150	11,432,681	110,997	20,439
	(*c*) with peshkash under Rs. 5,000	1,574	3,931	2,882	3,179,702	2,020	1,486
2. Unsettled estates (palayams, jagirs)		28	554	28	1,054,379	37,656	6,987
3. Inams (including service inams).	A. Unenfranchised	1,414	478	1,961	25,288	18	4
	B. Others	311,756	20,378	616,849	4,991,670	16	10
* 4. Lands held on ryotwari tenure (including those subject to mirasi rights).	A. By ryots paying more than Rs. 500.	2,814	22,953	9,794	708,400	261	1,733
	B. By ryots paying more than Rs. 100 and not more than Rs. 500.	49,916		116,416	2,502,094	53	340
	C. By ryots paying more than Rs. 30 and not more than Rs. 100.	281,982		574,180	5,549,227	20	99
	D. By ryots paying more than Rs. 10 and not more than Rs. 30.	736,418		1,418,776	6,947,112	10	35
	E. By ryots paying not more than Rs. 10.	2,228,306		3,645,447	6,873,034	3	7
† 5. Miscellaneous.	A. Cowles	39	33	40	1,064	27	21
	B. Purchasers of waste lands.	580	129	774	27,345	47	39
	C. Rented estates	914	569	1,855	97,016	106	23
	D. Land-owners who have redeemed the revenue.	523	146	566	3,798	7	5

* Figures in columns 4, 5 and 6 do not include those for South Canara, for which details are not available; the aggregate figures under 5 sub-heads in columns 4, 5 and 6 for South Canara are 85,908, 454,393 and 9.

† The rented estates shown against item 5 (*c*) comprise 349 unsettled villages in the Golgonda agency of the Vizagapatam district, 205 unsettled villages in the Bhadrachalam taluk, Polavaram and Yellavaram divisions of the Gódávari district, 11 izara or leased villages in the Chingleput district and 4 leased villages which originally formed part of Kadathur Mitta of the Uttankari taluk, Salem district.

SYSTEM OF SURVEY.

Introduction.

142. Indian land surveying is of three kinds—Trigonometrical, Topographical and Revenue or Cadastral.

Trigonometrical Survey.

143. Trigonometrical Survey is divided into three distinct branches—First, the selection of sites for base-lines to form the ends of a series of triangles, the setting out of the base-lines and their measurement with the utmost possible accuracy. Each base-line becomes the side of a triangle, the length of the other two sides of which can be ascertained by angular observations. Second, the construction of the series of triangles. This is done by determining the position of selected points on the earth's surface by angular observations taken at first from the ends of a measured base, and then carried on from point to point in succession, so as to form a network of positions fixed by this triangulation along a belt of country. The accuracy of the work is checked by the base-line at the other end of the series of triangles. The primary triangulation is completed by a sufficient number of such belts across the area to be surveyed, both in the direction of latitude and longitude. Third, astronomical observations for latitude and longitude. These are taken at selected points in the network of triangles and operate as a further check on the accuracy of the triangulation. The positions of a sufficient number of points spread over the area to be surveyed are in this way fixed with the greatest accuracy.

Great Trigonometrical Survey. *1802–1824.*

144. The Great Trigonometrical Survey of the Madras Presidency was carried out by Major, afterwards Colonel, Lambton between the years 1802 and 1824. With the exception of the series of triangles along the West Coast, Lambton's triangulation has in later years been superseded by what are known as—

(1) the great arc series which extends from Cape Comorin to the Himálayas,
(2) the East Coast series from near Tuticorin to Calcutta, and
(3) the Madras longitudinal series of which the two ends are Madras and Mangalore.

From the beginning of 1818, the operations of the Great Trigonometrical Survey have been conducted by the Survey of India, which is an Imperial department with head-quarters at Calcutta.

Minor triangulation. *1879–1886.*

145. The Madras Survey department carried out between the years 1879 and 1886 a minor triangulation of the hill tracts of Gódávari and Kistna districts, the Nallamalais in Kurnool, the Javadis in North Arcot, the Shevaroys and Kollimalais in Salem, the Warsanad hills in Madura, the Biligirirangan hills and the Anamalais in Coimbatore, the Attipadi Valley in Malabar and the South-East Wynaad in the Nilgiris. The Madras Survey minor triangulation consisted of the breaking up of the large triangles of the Great Trigonometrical Survey into smaller ones and the determination of the latitudes and longitudes of the minor trigonometrical stations with almost the same rigorous accuracy as in the Great Trigonometrical Survey.

Longitude.

146. The longitudes of all the trigonometrical survey stations in India can be referred to the Greenwich Meridian, taking that of the Madras Observatory as 80° 18′ 30″ east, as at first determined by Colonel Lambton. With the introduction of modern instruments of observation and the adoption of more accurate methods of calculation, this value was found to require a correction of 1′ 9″ to make it accord with the Great Trigonometrical Survey. This reduced value, viz., 80° 17′ 21″ has been adopted in all calculations made by the Madras Survey department. The most recent value arrived at by the Survey of India is 80° 14′ 54″.

Topographical Survey. *1840.*

147. The earliest topographical surveys were made by officers of the Madras Quartermaster General's department at the end of the last century, when, however, no triangulation was employed. The necessity for making triangulation the groundwork for topographical surveys was, however, recognised soon afterwards. The topographical survey of the Madras Presidency was completed by about the year 1840 and the results of the survey were embodied in 23 ordnance sheets or, as they are called, sheets of the Atlas of India published by the Surveyor General's Office, Calcutta, on the scale 1 inch=4 miles. The Atlas sheets are revised at Calcutta from time to time as the materials of later topographical surveys and of cadastral

surveys become available; they are published in quarter sheets. Up to date, 25 quarter sheets relating to the Madras Presidency have been revised and published.

By the Madras Survey department. *1858–1886.*

148. When the cadastral survey of the Presidency was first instituted in 1858, the topographical survey, which till then remained under the direction of the Surveyor General, was amalgamated with the revenue survey. The topographical survey by the Madras Survey department of large hill tracts has since 1879 been based on minor triangulation springing from and closing on the great triangulation of India. The great and minor trigonometrical points were projected in office on the scale of one inch to the mile on sheets called plane table sheets; and on these latter was also plotted any traverse work that might have been executed in the tract for survey. The sheets were then mounted on plane table heads or boards and sent to the field, where topographical features, such as hills, rivers, tanks, village sites, roads, etc., were delineated on them.

Zamindaries.

149. In the case of large zamindaries such as Ramnad and Sivaganga, to which the operations of the cadastral survey did not extend, the exterior boundaries and some interior divisional lines were traversed with theodolite and the traverse work was plotted on plane table sheets. In the case of proprietary estates and other non-ryotwari villages of small area, which are often surrounded by ryotwari land, it generally happened that the true boundaries had already been demarcated and surveyed with theodolites. For large zamindaries, the scale of the map was either 2 inches or 1 inch to the mile. For small proprietary estates, the scale was 4 or 2 inches to the mile.

By the Survey of India department. *1886–1902.*

150. The topographical survey was retransferred to the Survey of India in 1886, and that department was expected to complete the survey of 13,508 square miles of country in the districts of Ganjám, Vizagapatam, Trichinopoly, Madura, Tinnevelly, Malabar and South Canara. Of this area, 536 square miles have been surveyed up to date during the course of forest surveys made by a party of the Survey of India department in Madura and Tinnevelly districts. The cadastral survey of Pudukkóttai State which adjoins Trichinopoly district and has an area of 1,100 square miles included in the area of 13,508 square miles, by a Survey Party organized by that State is approaching completion, and the cadastral survey of the Vizianagram zamindari, the area of which is about 2,000 square miles, in Vizagapatam district, is in progress and that of the Serugada estate, which is 30 square miles in extent, in Ganjám district, has been completed by the Madras Survey department.

Revenue or cadastral survey.

151. Revenue or cadastral survey forms the chief item of work of the Madras Survey department. The object of a cadastral survey is briefly the delimitation of village and field boundaries, the preparation of village maps showing these boundaries and topographical details, and of area-lists and field-registers, the former giving the area of each field and village and the latter containing particulars as to the numbers of fields, tenure, ownership, etc.

1853.

152. Before 1853, no cadastral survey had been attempted in the Madras Presidency. In that year, an experimental survey of villages in the South Arcot district was instituted. During the two succeeding years, the subject of a general survey of the whole Presidency was fully discussed, and in December 1856, the Court of Directors sanctioned the scheme submitted by the Government of Madras and strongly and unanimously recommended by the supreme Government. Shortly afterwards, the Superintendent of Revenue Survey was appointed and, the required establishment having been sanctioned, work was commenced in 1858.

153. The Madras cadastral survey comprises four distinct processes, viz., demarcation, survey, mapping and publication each of which is described below in detail.

Demarcation.

By the Settlement department. *1858–1866.*

154. The demarcation of boundaries of villages and fields was at first undertaken by the Settlement department. About the end of 1864, it was ordered that in all districts to be taken up thereafter, demarcation should be performed by the Survey department, but the order was given effect to only in 1866. By that time, the Settlement department had completed the demarcation of the whole of the districts of Gódávari, Kistna, Kurnool, Cuddapah, Nellore, Trichinopoly and Tinnevelly and of five taluks of Coimbatore and four taluks of North Arcot. The trijunctions of villages were marked with stones $3\frac{1}{2}$ feet high by about 1 foot square or with masonry pillars, 2 feet square and 3 feet high. Secondary pillars or stones, very little smaller than

those just mentioned, were also fixed, one on each side of the trijunction mark, *i.e.*, at the bends or corners of the village-boundary next to the trijunction. The demarcation of the rest of the village-boundary with durable marks was not insisted on. The cultivated portions of each village were divided into khandams (divisions) of about 50 acres. Two or more adjoining patta holdings were clubbed to form a survey-field, the size of which was limited to two acres in wet land and four acres in dry land. During field-demarcation, a field-register was prepared for each village, showing the nature of cultivation, tenure, ownership and extent by paimash of each survey field and its included holdings. In a column provided for the purpose, the area by survey was entered in office after the necessary calculations had been duly checked. The demarcation of khandam and field boundaries in Gódávari and Trichinopoly districts and in the taluks of Bandar and Gudiváda of Kistna district was carried out with earthen mounds which disappeared in course of time, thus necessitating a re-demarcation and re-survey. In Nellore and Gudur taluks of Nellore district and in the taluks of Hosúr, Dharmapuri, Krishnagiri and Tiruppattúr of Salem district, although the demarcation-marks as originally fixed were not of a durable kind, they were replaced subsequently by cut stones.

By the Survey department.

155. At the beginning of 1866, as stated above, demarcation became part of the duty of the Survey department. For some years, demarcation and survey were performed by different parties. There were six survey parties and three demarcation parties. An experiment of combining the two processes having proved successful, the demarcation and survey parties were amalgamated in 1873. When the Survey department undertook demarcation, the size of khandams was raised first from 50 to 80 acres and afterwards to between 100 and 150 acres. As regards survey-fields, the limits of size observed by the Settlement department, viz., 2 acres in wet and 4 acres in dry land was adhered to. The Survey department also subdivided waste lands likely to be taken up for cultivation within two or three years, the size of survey-fields formed being 4 acres in wet and 10 acres in dry land. In the year 1874, the clubbing of patta holdings in dry land of little value was permitted up to a maximum of 12 acres. When the survey of Tanjore district was ordered in 1885, the clubbing of holdings in wet land up to a limit of 4 acres was sanctioned subject to the condition that the holdings clubbed shall be irrigated from the same channel. In 1887, in accordance with the recommendations of the Survey and Settlement Committee presided over by Sir E. Buck, the maximum areas of survey-fields were raised to 6 acres in wet and 12 acres in dry land. But, as by adherence to this rule survey-fields often contained, especially in Malabar district, an inconveniently large number of sub-divisions (patta holdings), the boundaries of which it was very difficult to trace on the ground, the number of patta holdings to be clubbed to form a survey-field was limited in 1894 to ten.

1866.

1873.

Survey-field.

1874.

1887.

Stones used for demarcation.

156. The demarcation of the ryotwari villages of the whole Presidency was completed in 1896. Except in one taluk—Chicacole in Ganjám district—subdivisions of survey fields were not demarcated. The following are the dimensions of the different kinds of stones used for demarcation :—

Class I boundary stations—3 feet × 9 inches × 9 inches.
„ II khandam or division stations—2½ feet × 8 inches × 8 inches.
„ III boundary offsets—2 feet × 6 inches × 6 inches.
„ IV field stones—2 feet × 5 inches × 4 inches.

Where stone was cheap and quarried in the taluk, the size of field-stones was the same as that of boundary-offsets. All stones bear the broad arrow on one side. Stones of the first two classes have in addition a plummet-hole on the top and stones of class III a Saint George's cross cut on the top.

Survey.

157. This process comprises two principal operations, theodolite survey and cadastral survey. The object of theodolite survey is to provide a sufficient number of fixed points for the cadastral survey. For this purpose, the villages of a taluk were grouped into convenient blocks called main circuits, varying from 100 to 150 square miles in extent. First the main circuits were surveyed with theodolite and chain and then the village and division boundaries. To secure strict accuracy, the distances on the main circuit boundary were measured by the theodolite surveyor and

also by another person called the rechain surveyor who followed him. The angular work of the main circuit was checked by observations for azimuth taken at intervals of 40 or 50 stations. The main circuit traverses were set up in office, *i.e.*, the angles and distances were copied into traverse sheets and the bearings and latitudes and departures computed. The main circuits were connected with stations of the Great Trigonometrical Survey and the distance between two Great Trigonometrical stations according to the cadastral survey was compared with the trigonometrical distance. The average error for the distances so compared for the whole Presidency has been found to be 7·28 feet per mile.

158. From the commencement of the cadastral survey of the Presidency up to 1877, the cadastral survey distances were merely compared with the Great Trigonometrical Survey distances and the difference noted, but no attempt was made to correct the former so as to bring them into agreement with the latter, as the traverses were not worked on any one meridian common to main circuits, taluks or districts. But from 1878, the following method was adopted. A Great Trigonometrical station situated as near as possible to the centre of a district was selected as the origin of co-ordinates for the traverse work of the district. The main circuit traverse started from a Great Trigonometrical station in the vicinity of the circuit and closed on another Great Trigonometrical station. The true azimuths on the main circuit boundary were corrected for convergency with reference to the meridian of the Great Trigonometrical station of origin. The rectangular co-ordinates from the Great Trigonometrical station of origin to the two Great Trigonometrical stations introduced into the main circuit traverse were computed and with reference to the difference between these two co-ordinates, the cadastral survey latitudes and departures were corrected. The village and division traverses were computed from the main circuit traverses.

1878.

1892.

159. In the year 1892, the theodolite survey of village and division boundaries was dispensed with as being too costly for the localities which then remained to be surveyed. Villages were divided into triangles with sides about half a mile long; the three angles of each triangle were observed, base-lines measured at convenient intervals and the lengths of the sides of the triangles computed. With the exception of the trijunctions of villages, the stations used for this triangulation were generally not boundary-marks. This system was adopted for the taluks of Kóttayam, Calicut, Ernad and Chirakkal in Malabar district, Mangalore, Udipi, Coondapoor and Uppinangadi in South Canara district, and Dharmavaram, Hindupur, Madakasíra and Kalyandrug in Anantapur district.

1858–1865.

160. The method of cadastral survey or the measurement of individual properties and holdings underwent several changes as the survey progressed. From 1858 to 1865, survey-fields were measured on the khasrah method, according to which, if the field was quadrilateral, the four sides were measured or, if the field was irregular in shape, it was divided into convenient portions either quadrilateral or triangular or both and their sides measured. The rule was that the diagonal of every quadrilateral should be measured, but this was not always done. Some of the measurement-books prepared under this system contain a sketch of each field not plotted to scale, but in others there are no sketches. The measurement-books were supplemented by a sketch for each khandam in which the boundaries of the fields and the sides of the quadrilaterals and triangles with their measurements were shown, but these sketches were subsequently destroyed. The khasrah method of measuring fields enabled the field surveyors, or, as they were then called, amins, to calculate the areas of fields, which was done by multiplying, if quadrilaterals, the mean of the two opposite sides, or, if triangles by multiplying the two shorter sides and taking half the product. This incorrect method of calculating areas was abolished towards the end of 1864, when the instrument called computing scale was introduced. The necessity for measuring fields in quadrilaterals having thus ceased to exist, field surveyors were directed in 1866 to measure from stone to stone so as to divide each field into triangles as nearly equilateral as the shape of the field would allow. The measurements were recorded in books containing on each page a sketch, not drawn to scale, of several survey fields. A further change was made in 1877 in that surveyors were permitted, when the bends on the field boundaries were very numerous, to fix by offsets the position of all marks less than 50 links from a direct line between the adjoining marks.

The khasrah method.

The computing scale.

1864.

1877.

Sub-divisions.

161. In accordance with the recommendations of the Survey and Settlement Committee in 1877, the measurement of sub-divisions or interstitial fields which till then was being made by the Settlement department was entrusted to the Survey department. In the taluks of Máyavaram, Mannárgudi, Hadgalli and Sarvasiddhi which were surveyed in 1887, the field measurement books show only such fields as contain sub-divisions. In these four taluks, survey-fields and sub-divisions were measured on the khasrah method which was in vogue up to 1865. In all the other taluks surveyed between 1888 and 1891, there are, in addition to the field-books, sketches not to scale, on which are recorded the measurements of chain-lines and offsets by which tri-junctions of fields and important bends on field boundaries were fixed. Each of these sketches contains fields covering an area of about 160 acres.

1891.

162. Towards the end of 1891, after visiting the Central and North-Western Provinces, where Patwaris (village accountants) were employed as surveyors in measuring and drawing maps, Mr. Cardozo, then Superintendent of Survey, recommended that in Malabar and South Canara, where owing to heavy rains no field work was possible during four months of the year, the surveyors should recess in office during the monsoon and finish the maps for the area surveyed during the field season. With this end in view, and also to minimise the number of survey records, the following method was adopted for the 12 taluks surveyed since 1892. The points fixed during the theodolite survey were plotted on scale one inch = 2 chains or 40 inches to a mile, on sheets each containing a block of about a quarter square mile. The block was divided into large triangles and the boundaries of survey fields and included sub-divisions were fixed by offsets taken to the sides of the triangles. All the boundary lines and all measurements were entered in blue ink on the block map, which thus became a complete record of measurement. The areas of fields and sub-divisions were computed from this record with the area square which is a piece of tissue paper on which are printed squares and rectangles, the former representing 10 cents and the latter half a cent each. The method of survey described above was that adopted for the initial cadastral survey of Government villages.

The area square.

Zamindaries.

163. For large zamindaris such as Vizianagaram, the cadastral survey of which is now in progress, the theodolite survey is made on the system which was followed between the years 1878 and 1891. As regards demarcation and field-survey, patta holdings are clubbed up to 4 acres in wet and 8 acres in dry land and the survey-fields are demarcated with stone. Each field is divided into one or more triangles. The distance from stone to stone on the field boundary and from bend to bend on the sub-division boundaries are measured first. The sides of the triangles are then measured and offsets taken to all bends on the fields and sub-division boundaries. As each field is measured, it is plotted in a field measurement book in duplicate with the triangulation measurements and offsets, each field on a separate page. The scale of the field map is either 1, $\frac{1}{2}$ or $\frac{1}{5}$ inch to the chain according as the area of the field is less than 5, from 5 to 20 or over 20 acres respectively. The areas of survey-fields and sub-divisions are taken with the area square and adjusted with the area computed from the village map with the computing scale. The total area of fields in the village is compared with the traverse area and the difference allowed is one per cent. In the case of estates and other non-ryotwari villages of small area, the traverses are not harmonised with reference to the values of Great Trigonometrical stations, but, with this difference, the method of survey is the same as that adopted for the Vizianagaram zamindari. Up to date, the cadastral survey of 52 proprietary estates and other non-ryotwari villages with a total area of 2,038 square miles has been completed. The cadastral survey of 28 more estates, etc., the estimated area of which is 3,000 square miles, is either in progress or has been ordered.

Mapping.

164. The maps prepared by the Madras Survey department are chiefly of four kinds—

(1) Village maps—scale 16 inches = 1 mile.
(2) Taluk and Zamindari maps—scale 2 inches or 1 inch to the mile.
(3) District maps—scale 1 or $\frac{1}{2}$ inch to the mile.
(4) Miscellaneous maps—on various scales.

Village maps.

165. With the traverses computed from the theodolite survey field-books, the village and division boundaries are first plotted. Starting from the points thus fixed, the fields measured during the field-survey are plotted and the village map completed in other respects. Prior to 1878, village maps were not prepared in a style suitable for reproduction by photography nor were they drawn on sheets of uniform size. From that year, a standard size was adopted—40 by 25 inches for full sheets and 20 by 25 inches for half sheets. All coloured lines connecting traverse-stations and colour-ribands indicating wet and dry cultivation, which were drawn on the face in the maps prepared in former years, were relegated to the back; and the detail shown on the face of the maps was drawn in such a manner as to produce a good result when reduced by photography to a scale of 8 inches to a mile. In the block maps prepared on the 40-inch scale between the years 1892 and 1896, the field and sub-division boundaries and the topographical details drawn in blue were inked and the field numbers typed in black sufficiently thick to stand photo-reduction to the 16-inch scale, but the chain lines, offsets and measurements, which were not required to appear in the village map when published, were left in blue. For villages mapped on the 40-inch scale, a skeleton map was prepared on the scale of 16 inches to a mile showing only the points fixed by theodolite.

1878.

1892–1896.

Taluk maps.

166. For the compilation of taluk maps, different methods were adopted at different periods. At first, the maps were not drawn on geographical projection. The main circuit boundaries were plotted by traverse and the detail within them was filled in from pentagraph reductions of the village maps. From 1879 to 1886, taluk maps were drawn on sheets on which were previously projected lines of latitude and longitude and Great Trigonometrical stations and main circuit tri-junctions. Either the whole taluk was contained in two or more sheets joined together, or each sheet contained 15 minutes of latitude and 30 minutes of longitude. Village maps were reduced as before by pentagraph and the reduced details inserted in the projected sheets. From 1887 to 1894, an 8-inch projection was prepared on which the 8-inch lithographed village maps were joined together with reference to the positions of the Great Trigonometrical stations and other fixed points. Slips of paper on which were printed symbols required to appear on the taluk map, viz., wet and dry cultivation, tanks, roads, railways, village sites, village boundaries, names, etc., were pasted over the corresponding details on the 8-inch maps. The following is the method adopted in recent years and now followed. The 16-inch or 8-inch lithographed maps are reduced by photography to the scale of 2 inches to the mile and are printed in pale blue ink. The blue prints are joined together on 2-inch projected sheets showing lines of latitude and longitude, Great Trigonometrical stations and other fixed points. The 2-inch blue prints are then carefully drawn over in black for photo-reduction to the 1-inch or $\frac{1}{2}$-inch scale.

1879–1886.

1887–1894.

1902.

District maps.

167. The methods of compiling district maps from time to time have been similar to those adopted for taluk maps.

Publication.

168. The processes adopted in the Central Survey Office for printing maps are Lithography, Photo-zincography and Cyanotype. Village maps coloured on the face and unsuited in other respects for reproduction by photography were copied on hand-transfer (paper coated with flour paste and gamboge) and lithographed. The first attempt made by the Madras Survey department for making photography serve the purpose of printing maps was in 1873, but the art was not applied to village maps until 1878. In the latter year, zincography was also introduced. Village maps on the 16-inch scale have since then been reduced to the 8-inch scale and zincographed. Where manuscript block maps were prepared on the 40-inch scale, they were reduced by photography to the 16-inch scale. The boundary lines and topographical details drawn in black were reproduced in black, but the measurements, etc., which would overcrowd the 16-inch map, did not appear in the photograph as they were recorded in blue ink. The photo-carbon transfers were fitted on to the 16-inch skeleton which accompanied the block maps. The skeleton was then transferred to zinc and copies of the village map printed.

1873.

1878.

Village maps.

169. Generally 35 copies are printed of each village map. Twenty-four copies, of which one copy, intended for the karnam, is on cloth, are supplied to the Collector and 6 copies to the Settlement department. The remaining 5 copies, of which one is on vellum cloth, are lodged in the Central Survey Office. For many

villages however the stock in the Survey Office is only one and in some cases is *nil*, copies having been used up for the compilation of taluk maps, etc. Forty copies were printed of the village maps of South Canara district, and 50 copies of those of Wynaad taluk. In the former 30 copies and in the latter 40 copies of each map were supplied to the Collectors concerned. No village maps were printed on cloth before 1891, nor any on vellum prior to 1870.

Taluk and district maps.

170. Up to 1886, taluk and district maps were either photographed to scale or copied in the Central Office on hand-transfer and printed, according as they were drawn in a style suited for reproduction by photography or not. Taluk maps, drawn from 1887 to 1893 on the 8-inch scale, were reduced by photography to the one inch scale, the carbon transfers were joined together on an one inch projection and transferred to zinc and copies printed. District maps compiled in recent years on the 2-inch scale are reduced by photography to the one inch or half-inch scale and printed in blue by what is called the cyanotype process which was introduced in the year 1901. The taluk maps of Ernad, Chirakkal, Uppinangadi, Coondapoor and Goomsur and the district maps of Ganjám, Gódávari, Malabar and South Canara have not yet been published. The maps of the first mentioned four taluks and of the last mentioned two districts are now in the press. The maps of 51 taluks and of three districts, Kistna, Trichinopoly and Coimbatore, which were published many years ago, are now out of print. Of these the maps of 16 taluks and of one district, Coimbatore, are now in the press.

1886.

1887–1893.

1902.

Forest survey.

171. When topographical surveys were transferred to the Survey of India in 1886, it was arranged that that department should also undertake the survey of forest reserves, the necessary demarcation being made by the Forest department. A Forest Party of the Survey of India has been employed in this Presidency since 1888. Up to the end of 1900–1901, the survey of 11,559 square miles was completed in the districts of Kurnool, Cuddapah, North Arcot, South Arcot, Salem, Trichinopoly, Madura, Tinnevelly, Coimbatore and South Canara. The maps are published on scale 4 inches = 1 mile. Only those forests of which the area exceeds 10 square miles are surveyed by the Survey of India Party. The maps of forests less than 10 square miles in extent are prepared from the published village and taluk maps either by the Forest department or in the Survey office, Madras, and printed on the scale, 4 or 8 inches = 1 mile.

Mamul Wet survey.

172. In Kistna and Gódávari districts, owing to the introduction of large irrigation projects, considerable areas, which till then had been waste or only fit for dry cultivation, were brought under wet cultivation. In order to levy water-rate on the areas, and also to determine the extent of lands whose original sources of irrigation were blocked up by the new canals, it was found necessary to make a detailed survey of the non-ryotwari villages in the deltas in these two districts. Lands entitled to free irrigation, mamul wet areas as they were called, were demarcated *en bloc*. The newly-irrigated areas outside the mamul wet blocks were formed into survey fields of about 10 acres and demarcated and measured. The patta holdings within the 10-acre fields were also measured. A field measurement book, field register and map were prepared for each village. For 56 out of 302 villages in the Gódávari delta, village maps showing field-boundaries were prepared on the 16-inch scale and printed on the 8-inch scale. In the remaining 246 villages, the map serves only as a key to the field measurement book, as it does not show the boundaries of each individual field but only of blocks of fields. The survey in Gódávari and Kistna districts began in 1890 and was completed in 1896. The area surveyed was 1,226 square miles. In Ganjám district, a similar survey of inam villages which came under the influence of the Rushikulya project was carried out between 1891 and 1894 under the supervision of the Collector. Owing to the advent of the Periyár water-works, the non-ryotwari villages in Mélúr, Madura and Dindigul taluks, area 88 square miles, were also surveyed. This last survey was made in such detail that it was practically a cadastral survey.

Block survey by soils.

173. For the purpose of determining village cess, a block survey of whole inam villages was made in Tanjore and Nellore districts and in the Sérugadá estate, Ganjám district between the years 1895 and 1900. The villages were divided by settlement classifiers into blocks according to the peculiarities of the soil and demarcated with pegs or earthen mounds. The blocks were measured and mapped

by the Survey department and the areas of the blocks entered in classification registers prepared by the Settlement department. A similar survey is approaching completion in Trichinopoly district, and is in progress in Gódávari and Kistna districts and in the Dhárákót and Kurla estates and Berhampur taluk of Ganjám district. In South Arcot district, both demarcation and survey were made by the Settlement department.

Survey of Madras City.

174. A survey of the Madras town was made by the Public Works department between the years 1854 and 1864. The results of the survey were not wholly adopted in the revenue accounts, and a question having arisen as to the sufficiency or otherwise of the survey, the Hon'ble Mr. Bliss, who was then first Member of the Board of Revenue, reported in 1891, that the survey maps were of little or no use for revenue purposes, and quite out of date for topographical purposes, and recommended a new survey. The new survey was made between the years 1895 and 1897.

Municipal surveys.

175. It was also considered necessary to make a survey of the mufassal municipal towns and to plot maps on a scale sufficient to make them available for checking encroachments and defining the limits of private and public properties. The survey of the 28 towns was completed up to the end of 1901. Every holding was measured, and a map, field book or record of measurement and register were prepared for each of the divisions or wards into which the town was divided for municipal purposes. The manuscript revenue maps are either on the scale of 160, 80 or 40 inches to the mile according as the locality concerned is close, medium or open, and the printed maps are on half the scale of the manuscript maps. Topographical maps are also printed on scale 20 inches to the mile for each ward or division. The town maps are on the 10-inch scale. The towns of Tellicherry, Cannanore, Cochin, Calicut, Anantapur, Bezwada and Masulipatam were surveyed between 1890 and 1896, when the cadastral survey or resurvey of the taluks, in which they are situated, was in progress, and mapped on scales varying from 32 to 160 inches to the mile. The records prepared for these seven towns afford sufficient information for the purpose in view, but they are under revision according to the method adopted for the 28 towns mentioned above. The survey of the remaining towns in the Presidency has been ordered to be postponed.

Resurveys.

176. In some of the districts first surveyed, the demarcation of fields was not of a permanent character, and in others a large percentage of the stones fixed had disappeared. The sketches of interstitial field measurements made by the Settlement department were generally not forthcoming, and in the few instances in which they did exist, it was not found practicable to incorporate them into the field measurement books prepared by the Survey department. No attempt had been made to keep the survey up to date, and the maps originally prepared were out of print and out of date. For these reasons, it was found that in the districts, the term of the original settlement of which was approaching completion, a resurvey prior to resettlement was necessary. Accordingly, the resurvey of Trichinopoly and Gódávari districts and of two taluks, Bandar and Gudiváda of Kistna district was sanctioned in 1891. Between the years 1893 and 1899, the resurvey of the remaining taluks of Kistna was sanctioned as also that of Kurnool and Nellore and of five taluks in Salem, viz., Atur, Salem, Námakkal, Tiruchengódu and Úttangarai. The resurvey of Trichinopoly, Gódávari and Kistna districts and of the five taluks in Salem has been completed. It is in progress in Kurnool and Nellore and one taluk, Ramallakot, has been completed in the former and two, Nellore and Gudur, in the latter. The first district taken

1891.

up for resurvey was Trichinopoly. The resurvey began in 1891. The earthen mounds used during the original demarcation had all disappeared. The redemarcation and resurvey therefore followed existing occupation, and survey fields were formed by clubbing holdings up to 12 acres in dry land and 6 acres in wet land. Except that the village boundary traverses prepared at the original survey were utilized during the resurvey, the resurvey of Trichinopoly was to all intents and purposes an initial survey. The records prepared were (1) manuscript map, scale 40 inches = 1 mile for each of the quarter square mile blocks into which the village was divided, showing survey-fields and sub-divisions and all measurements; (2) photo-zincographed village map, scale 16 inches = 1 mile, a facsimile reduction of record No. (1), but without the measurements entered in blue on that

record; (3) field register or record of rights; (4) area list giving the area of each survey field and sub-division. Five taluks of Gódávari district, viz., Bhímavaram, Tanuku, Narasapur, Amalápuram and Rámachandrapuram and four taluks of Kistna district, viz., Bandar, Bezwada, Gudiváda and Bápatla were also resurveyed on the system adopted in Trichinopoly. The resurvey of Salem was commenced in 1893. As in Trichinopoly, the redemarcation in Salem followed present occupation, but, with a view to reduce the cost of work, no alterations were made either in the original size or numbering of the survey fields. A field measurement book showing the resurvey boundaries of the fields was plotted to scale but not the village map. In a lithographed copy of the original survey map, the scale of which was 16 inches = 1 mile, the field boundaries (which might differ slightly from the demarcated boundaries shown in the field measurement book) were entered in ink, and a facsimile photo-reduction of this copy to the 8-inch scale served as a key to the position and shape of the survey fields. The four upland taluks of Gódávari district and the taluks of Tenali, Guntúr and Nandigám in Kistna district were redemarcated and resurveyed on the method adopted for Salem.

177. In the resurvey of the four upland taluks of Kistna district which began in 1899, the demarcation of Government waste, poramboke and inam lands was made strictly in accordance with the measurements recorded in the original survey field measurement books. In patta lands, the demarcation followed occupation except where it differed from the original survey by more than 20 links, in which case the original survey measurements were followed. As regards the size of survey-fields, a departure was made in the four upland taluks of Kistna from the method adopted for Trichinopoly and Salem. Where old fields of more than four acres in wet land and 8 acres in dry land contained more than one patta holding, they were split up into new survey fields of not more than these sizes. In the resurvey of Kurnool district which is now in progress the method just described has been followed for Ramallakot taluk. In the other taluks of Kurnool and in Nellore district, the demarcation of patta lands follows occupation except where their boundaries are disputed. The village maps, prepared during the resurvey of the 4 upland taluks of Kistna and of Kurnool and Nellore districts, are correct plots on the 16-inch scale, and not copies of the old lithographed maps as in the 5 taluks of Salem district. *1899.*

178. In the resurveys made up to the beginning of 1900, karnams were employed in measuring their villages. Their outturn in Trichinopoly and Salem districts was good and in Gódávari and Kistna districts fair. But in Kurnool district, where the karnams attach very little value to their appointments, the attempt to utilise their services for survey work has proved a complete failure. In Nellore, the resurvey is conducted entirely by surveyors. **Employment of karnams.**

179. The question of maintenance of boundary-marks and survey records has engaged the attention of the authorities ever since 1864. But it was not until 1893, that any practical steps were taken in that direction. In the latter year, with a view to train the karnams in the duties of maintenance, survey schools were opened, and by the beginning of 1895, all the karnams in the Presidency went through a course of instruction in surveying. Soon afterwards, the Presidency was divided into six survey divisions, each comprising three or four districts. A Survey officer was appointed to each survey division and a District Surveyor to each district. To keep up the karnam's knowledge of survey work, annual schools lasting for 10 or 15 days were held in each taluk, under the supervision of Survey and Revenue Divisional officers. The last schools were held at the end of 1899. The results of these schools showed that the survey qualifications of more than 50 per cent. of the karnams were either "indifferent" or "bad." Moreover, the arrears of measurement of sub-divisions and of replacing missing stones, which had been accumulating for many years, were too heavy to be cleared off by karnams. Field measurement books for a large number of villages have been prepared by the karnams, but the books are far from complete and require to be carefully checked before they can be accepted as correct. The arrangements for maintenance having proved ineffectual, the survey divisions were abolished from April 1900. There is now a District Surveyor in each district, except Kurnool, Nellore, Madras and South Canara. A scheme for the organization of a Land Record department under adequate supervision is now under the consideration of Government. **Maintenance. Survey Schools.** *1893.*

Law.

180. The legal provisions under which the survey work of this Presidency was conducted up to 1897, are those contained in Act XXVIII of 1860, "an Act for the establishment and maintenance of boundary marks and for facilitating the settlement of boundary disputes in the Presidency of Fort St. George." Under this Act, Government bore the cost of all survey station stones which were not boundary-marks and of all boundary-marks in unoccupied ryotwari lands, and the owners bore the cost of the boundary-marks which defined occupied fields. For the better maintenance of boundaries after the completion of survey, and for the recovery of the cost of restoration of demarcation-stones from the ryots concerned, Act II of 1884 was promulgated. This Act made the owner or occupier responsible for the maintenance of the boundary-marks of his estate and enabled the Collector to enforce the maintenance of the demarcation generally and to recover, where necessary, the expenses incurred in the repair of boundary-marks from the owner or occupier of land. The two Acts have been repealed by the Madras Survey and Boundaries Act No. IV of 1897, "an Act to amend the law relating to survey of lands and settlement of boundary disputes." While embodying in effect the provisions of the two former Acts, the new Act enables the Government to undertake the survey of private estates on the application and at the expense of the proprietors. It also empowers the Collector to enforce the maintenance of survey-marks in estates under conditions similar to those prescribed for Government villages. Chapter IV of the new Act provides for the settlement of boundary disputes arising otherwise than in the course of survey by the Collector himself or by one of his subordinates specially empowered, or by a Survey officer specially appointed for the purpose.

Establishment.

181. There are now six survey parties, four employed on resurveys, and two on initial cadastral survey of proprietary estates. One of the Estate Survey Parties is also making a survey of cultivation scattered through villages in hills, which were excluded from the operations of the original cadastral survey. A survey detachment is working in South Canara district in measuring supplemental sub-divisions for the Settlement department. Besides these, there is the controlling and photo-zincographic office in Madras.

SYSTEM OF SETTLEMENTS.

Early Settlements under the British Government.

182. The first general acquisition of territory by the East India Company—the first from a revenue point of view—was the country round Madras, which now forms Chingleput district. The revenue of this tract was assigned by the Nawáb of the Carnatic as a contribution towards the expenses of the wars undertaken in his behalf. At first the direct administration was not assumed; the revenues were collected on the native plan; in 1780, however, the country was leased out by the Company in large farms on nine-year leases. The renters failed and the estates were sequestered in 1788. The district was then placed in charge of one or two Collectors, as the chief revenue officers were then called, the term being borrowed from Bengal. The most famous of these, Mr. Lionel Place, determined to restore the ancient village organization as the basis of revenue management and settled the amount of the Government revenue with the village councils, leaving it to the villagers to assess themselves individually. This system might have succeeded, but was summarily terminated in 1802. Under the orders of the Court of Directors the district was then divided into estates, each estate being assessed at a fixed sum varying according to its size and resources, and these estates were sold by auction to the highest bidder.

Chingleput. *1780.* *1788.* *1802.*

Northern Circars.

183. The next acquisitions of the Company in point of time were the Northern Circars (administrative divisions) five in number, which form the present districts of Ganjám, Vizagapatam, Gódávari and Kistna in the north-east of the Presidency. They were obtained by grant from the Delhi Emperor in 1765 and came at once under British administration. It was found that they consisted of large farms held by large renters called zamíndárs (as in Bengal) or in a few cases by native chiefs whose titles dated from the pre-Muhammadan period, and of crown lands (Havéli lands) reserved for the support of the governors of the province or members of the royal family and their immediate dependents. The zamíndárs were left in possession and the crown lands were parcelled out and leased to revenue farmers for a term of years. In 1769 provincial councils were formed after the model of Bengal to supervise the revenue management. They found the work of looking after the zamíndárís too great for them and did not effect much. The next step was the appointment by the Court of Directors of a Special Commission or Committee of Circuit to make tours in the districts and institute inquiries into rights and interests. Their instructions were conceived in a liberal and enlightened spirit, but the local councils did not support the members and the renters did all in their power to thwart them. The commission therefore resulted in failure. In 1786 a Board of Revenue was established at Madras on the pattern of the Board already existing in Bengal, and about the same time individual collectors took the place of provincial councils in the circars.

1765. *1769.* *1786.*

Lord Cornwallis' system of permanent settlement.

184. In the same year that the Madras Government entered on the management of the Northern Circars, the Bengal Government assumed that of Bengal, Behar and Orissa; and experiments were conducted in the latter case in very much the same way as in the former. The Bengal Government, however, came earlier to a decision and when Lord Cornwallis arrived in India in 1786 the plan of the permanent settlement with the Bengal zamíndárs had already been arranged. A tentative settlement of the whole of Bengal for a period of ten years was announced in 1789, and in 1792 the experiment of a permanent settlement was declared to be confirmed. Pressure was brought to bear on Madras by the Bengal Government to adopt the same policy and the Court of Directors sent out orders to this effect in 1795. The Madras Board, however, replied that it was hardly prepared to recommend the perpetuation of the settlement and required time for the collection of further information. In 1799 positive orders were issued from England that Lord Cornwallis' permanent system was to be adopted throughout the Madras Presidency. Eventually the Madras Government reported to the Supreme Government that it was possessed of materials for a permanent zamíndárí settlement in certain parts of the country. A special commission was appointed, and between the years 1802 and 1804 the northern districts of Madras were permanently assessed. The lands already in the hands of zamíndárs were confirmed to them in perpetuity, the assessment (peshkash) being fixed at two-thirds of half the gross produce estimated

1789–1792. *1795.* *1799.* *1802–1804.*

on an average of the previous thirteen years. That is to say, half the produce was to be left to the cultivator, one-sixth was to be the zamíndár's share, and the remaining two-sixths was the Government revenue. The amount of the latter once fixed was unalterable, no increase ever being leviable on account of extension of cultivation to waste lands. The crown lands were parcelled out into estates of a convenient size, assessed in a similar manner and sold as permanently-settled revenue farms to the highest auction bidder. Regulation XXV of 1802 detailed the terms on which they held their property. In course of time, however, many of these artificially created estates came back to the hands of Government owing to failure of the purchasers, and the lands then became subject to the ordinary (temporary) settlement, there being none to repurchase them. Though great numbers of zamíndárís were sold for arrears, purchasers were generally found for them and they did not cease to be permanently-settled estates. Only in a comparatively few cases was there no purchaser, and then the lands were retained by Government as 'Khás Maháls,' *i.e.*, estates retained in the hands of Government.

The Ceded districts, the Carnatic and southern districts. *1792–1801.*

185. While these measures for the settlement of the more ancient territories of the Company were in progress, new territories were added to the Presidency, and the question of land assessment came up again for discussion in connection with the part of the country ceded to the English in the south. In 1792 the first war with Típú Sultán of Mysore placed a considerable tract of country comprising the present district of Salem, part of Madura, and Malabar in the hands of the British. The second war with Típú added Canara and Coimbatore. According to a treaty with the Nizám of Haidarábád in 1800, what are now called the Ceded districts, viz., Bellary, Anantapur, Kurnool and Cuddapah, were ceded in perpetuity. In 1801 all the remaining possessions of the Nawáb of Arcot in the Carnatic comprising the present districts of Nellore, North and South Arcot, Madura, Trichinopoly and Tinnevelly were made over to the British, thus carrying their possessions down to Cape Comorin. The state of Tanjore had been brought under British management in 1799 owing to the incapacity of its Hindu ruler. In the territory thus newly acquired, the same distinction was found as in the Northern Circars. That is to say, there were lands held by numerous chieftains (pálegárs) and lands held direct from Government.

The village lease system. *1798.*

186. When these new districts had to be settled, officers of the Civil Service were not available, and the failure of management in the previously acquired tracts furnished additional reasons for the appointment of military officers, who knew the language and the country. Accordingly, Captain Read was sent to the Bárámahál, as Salem district was then called; he had Munro and others as his assistants. Coimbatore was taken in hand in 1799 by two officers, who had been under Read. The settlement of the Ceded districts was undertaken by Munro in 1801. The Carnatic districts were settled on similar general principles immediately afterwards. Practically all these early settlements were tentative arrangements which depended largely on what the settlement officers found practicable. The general idea was to make a permanent settlement, but with whom was not determined. Captain Read's instructions were to grant leases to the headmen or the chief inhabitants of each village, that is to say one or more individuals were to be selected to hold the settlement and to pay, according to the terms of the lease, the amount that might be agreed upon as the revenue of the village. The leases were to be annual at first, but after sufficient information had been gathered, it was hoped that leases might be made for periods of five years. To begin with, Read offered terms to the headmen of single villages or groups of villages based on the recorded assessment of Haidar's reign corrected by comparison with accounts of actual cultivation. At the same time the interest of the cultivator was guarded to and a detailed field survey was made. This led to the idea of assessing each field according to its quality and leaving the cultivator free to keep the field or relinquish it and take another. The survey was finished and the assessment on each field determined by the year 1798, and a proclamation was made setting forth the terms of the settlement, one of the conditions being that all the resident cultivators of a village should be jointly responsible for the revenue due on all the lands cultivated during the year.

187. This was not the kind of 'village-lease' which the Board had intended, and an explanation was called for. Meanwhile Read was called away to the second

Mysore war and the consideration of what had been done was suspended by the attempt to carry out the orders to introduce the permanent settlement. In accordance with the orders received in 1799 the Bárámahál was divided in the years 1803–1805 into numerous revenue farms which were sold by auction to the highest bidder. A great many of the farmers, however, failed in the second year after having pillaged the villages in their farms, and many estates fell into the possession of Government again. It became evident that the permanent settlement could not be carried out, and a return was made to Read's system, which was in fact a ryotwárí settlement, *i.e.*, a settlement with each individual cultivator (ryot). The estates held by a few of the pálegárs in the Ceded districts and in the Carnatic districts were permanently settled, but in the majority of instances the pálegárs attempted to resist the British authorities in the hope of continuing the same lawless course of exactions and plunder that they had adopted before the annexation and were therefore destroyed or dispossessed.

Extension of permanent settlement. *1803–1805.*

188. The attempt to create artificial estates, which were to be assigned in perpetuity subject to the payment of a fixed sum as peshkash or land-revenue, was a general failure, and at last it became apparent that the conditions of by far the greater part of the Presidency were unsuited to the introduction of the zamíndárí system. In 1808 the Government of Fort St. George determined to recur to the system of 'village leases' in the districts in which the permanent settlement had not been established, and in which settlements were made with the individual cultivators and the revenue collected from them by Government servants on the principles worked out by Read, Munro and the men who had served under them. The chief objects of the change of system appear to have been economy and a desire to introduce a plan of settlement approximating to the zamíndárí settlement in perpetuity. Under the village-lease system the settlement was to be made with the village headman or with the general body of villagers, or failing them with a renter. The revenue due to Government was to be assessed on the average of the amount collected from the village in previous years. The leases were to be for triennial periods; they were afterwards made decennial. The great difference between this system and the ryotwárí system was that under the latter the cultivators were at liberty to extend or curtail their holdings and were only responsible for the payment of the revenue assessed on the fields actually held by them; under the former the lessee had no power of relinquishing any portion of his holding during the currency of the lease. It was not a successful experiment on the whole. The most general cause of failure was over-assessment. Lessees could not be found for many villages, and in these the ryotwárí system was continued.

Reversion to village-lease system. *1808.*

189. One great advantage of the ryotwárí system was the opportunity it afforded of acquiring information respecting revenue matters, of ascertaining the dues of Government and the rights of the cultivators. The universal introduction of the zamíndárí system had been held in abeyance for fear of sacrificing the interests of Government in the then imperfect state of knowledge, and the ryotwárí system was discontinued in favour of the village-lease system before all the benefits it was capable of yielding had been realized. However in 1817 the Court of Directors issued instructions for the abolition of the village-leases and the re-introduction of the ryotwárí system wherever practicable. At this period the zamíndárí system was in force in the districts of Ganjám, Vizagapatam, Gódávari, Kistna, Salem and Chingleput, in the permanently-settled estates of the pálegárs in parts of the Ceded districts, Nellore, North and South Arcot, Madura and Tinnevelly. In the unsettled portions of the latter districts and in Tanjore and Trichinopoly the village-lease system prevailed. In Coimbatore, Malabar and Canara the ryotwárí system had been established. In Malabar and Canara a class of landlords was found whose claims were so far recognized that they were allowed to retain a share in the produce. No survey was undertaken, the prevailing custom of measuring the land for purposes of assessment by the amount of seed it takes to sow it being recognized and adopted. In 1820 Munro became Governor of the Madras Presidency and took his seat in time to preside over the final establishment of the ryotwárí system. The early ryotwárí settlements had many defects. Restrictions were placed upon the relinquishment of land, and heavy assessments were imposed on garden lands, *i.e.*, lands cultivated with special crops. The survey and settlement were conducted so rapidly that there were very great inequalities. The assessments were largely dependent not so much on the estimates of produce as on

Introduction of the ryotwárí system. *1817.*

former assessments which had been run up to a high pitch under the Mysore Government or the Nawáb as the case might be. Such rates were liable to become unbearable when the selling price of grain became very low as it did for a number of years. Hence various devices were resorted to in order to mitigate the burden. All this has now given way to careful survey and deliberately framed and carefully equalized assessments. Garden lands have been classified and assessed as dry lands in all districts except Malabar and South Canara, in which owing to peculiar conditions of garden cultivation it has been found necessary to assess gardens at special rates.

Ryotwári Settlement.

190. Before proceeding to describe the machinery by which the existing settlements have been effected, the modern meaning attached to the term ryotwárí settlement may be explained. It means the division of all arable land whether cultivated or not into 'fields' and the assessment of each 'field' at a fixed rate for a term of years. The 'field' is an arbitrary area. There is no minimum size, but it is usual to fix a maximum. Where a survey-field comprises the holdings of two or more occupants it is sub-divided where such holdings are separately identifiable. Survey-fields may also be sub-divided to distinguish portions transferred or relinquished. All such sub-divisions are durably demarcated. The occupant pays the revenue so assessed on the area he actually occupies. This area may be constant or may be varied from year to year by the relinquishment of old fields and the taking up of new, which are available either as waste or in consequence of having been given up by some one else. The occupant deals directly with the Government and is responsible for no one's revenue but his own. He is given a document called a pattá, which sets forth the extent and assessment of each survey-field or portion of a field in his occupation. This pattá is liable to revision every year so as to bring it into accord with the actual state of affairs. The occupant thus enjoys all the advantages of proprietorship, subject only to the payment of the revenue due on the lands held during the year. The lands can be inherited, sold or burdened for debt in precisely the same manner as a proprietary right, provided that the person in whose name the land is registered in the Government accounts pays the revenue due to the State. The total number of holdings under this system in the year 1900–1901 was 32,99,996 with an average of 6·85 acres in each holding.

Institution of the Settlement Department.

1855.

191. In 1855, that is, a quarter of a century after the final adoption of ryotwárí as the standard revenue system of Madras, less than a fifth of the area of the Presidency was cultivated, while more than half of the area recorded as arable was waste. Though the population had largely increased and there had been uninterrupted peace, there had in all these years been neither any material increase of revenue nor any extension of cultivation. The incidence of assessment was everywhere very unequal, while a succession of years of low prices had had the practical effect of raising rates which were already too high. It was calculated that on the average Government at that time took as their share 50 per cent. of the gross produce of irrigated land and 35 per cent. of that of unirrigated land, while, to give the ryot any real proprietary interest in the land and to induce an extension of cultivation, from 25 to 30 per cent. of the gross produce was, it was thought, the utmost the Government should claim. The Presidency of Madras was also the only province of India in which no regular survey had been instituted. The early surveys, even the best of them, were defective. There were no maps—district, taluk or village—and no permanent boundaries, and the records of the surveys, such as they were, had been but imperfectly preserved. These early surveys, moreover, extended to only a few districts of the Presidency, and there were districts in which the only records of the area liable to assessment were the unchecked entries in the accounts prepared by the village officers. On these and similar considerations, the Government determined in 1855 that a general revision of assessments should be made throughout the Presidency, founded on an accurate survey and a more or less exact classification of soils which seemed the only right basis of a land-revenue settlement. The Government of India and the Home Government concurred in the necessity of the measure, and the Revenue Settlement department was constituted in 1858 with Mr. Newill as the first Director. The Settlement department at first undertook to demarcate the village and field boundaries. This was a tedious process involving much arbitration and the investigation of many disputes. The marks erected in many cases were temporary and destructible, and

1855.

1858.

had frequently to be renewed by others of a more permanent nature. This unsatisfactory work continued to occupy much time and attention until the districts of Gódávari, Kistna, Kurnool, Nellore, Salem, Trichinopoly and Tinnevelly were demarcated and surveyed, when the demarcation of boundaries was made over to the Survey department. This was in 1864. By the end of 1864 proposals *1864.* for the revision of the settlement of the whole of Trichinopoly, of that portion of Kurnool known as Kurnool proper, of the Masulipatam portion of Kistna district, of one taluk of South Arcot, and of the western delta of Gódávari district had been worked out and submitted for the consideration of Government. The results of these operations of the department were not, in the opinion of Government, satisfactory. Its organization as a separate department, distinct from the local revenue establishments, was held to be defective, and the experience and knowledge of the district officers were lost, their interest not being enlisted. The personal supervision which the Director could exercise over the operations of scattered parties could be only nominal. The time available for ascertaining by experiment the productive powers of the soil was necessarily very limited, and the conclusions arrived at by the department had not, in this respect, commanded confidence. Much time and money were wasted over minute details of little practical value, while the really important work of a settlement was left too much to ill-paid subordinates. Except, therefore, in certain districts, where the work had already so far advanced as to make its continuance by the special department desirable, Government resolved to place all settlement operations under the immediate supervision of district officers controlled by the Board of Revenue. The new system was introduced in two districts—Tinnevelly and Nellore—the Collector of the former being, from long experience as a settlement officer, especially qualified for the duty. But in Nellore the experiment resulted in such a failure that in 1868 Government transferred the settlement back to the special *1868.* department on the ground that the retention of the special department was the only method by which it was possible to ensure celerity and efficiency in settlement work, consistency and uniformity in the details of re-assessment and a fair measure of relative equality in the resulting taxation and to save the country from the neglect which must occur if the Collector and subordinate revenue officers were withdrawn from their ordinary duties. Settlement operations continued everywhere, except in Tinnevelly, under the control of the special department till the end of 1873, when, on the transfer of the then Director to the Board of Revenue, *1873.* that appointment was placed in abeyance for some months. On the appointment of a temporary incumbent in 1874, the question of abolishing the department as *1874.* a separate institution was again considered. The settlement of the whole of Trichinopoly, Kistna, Gódávari, Nellore and Salem districts, and of parts of South Arcot, Kurnool, Cuddapah and Tinnevelly had been by that time completed. The area settled by the department in these 15 years was 27,892 square miles, and the cost incurred, including demarcation, amounted to Rs. 42,84,775. The cost of settlement proper was Rs. 24,06,733 or Rs. 83 per square mile. There remained 26,146 square miles to be settled, and it was estimated that the time required to accomplish this would be 13 to 14 years. The decision given was in favour of the continuance of the department under a separate head. The department continued to be so administered till the latter part of 1879, when, in consequence *1879.* of the financial exigencies of the Empire, the appointment of Director was abolished, and the strength of the department reduced by about half. The department was, under these altered conditions, administered by a member of the Board of Revenue. This arrangement lasted till the end of 1882, when *1882.* the appointment of Director was revived and conjoined with that of the newly constituted Directorship of Agriculture. But at the re-organization of the Board of Revenue in April 1887, the department was again placed under the direct charge *1887.* of the Board, one of its members assuming the portfolio under the designation of the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture.

Original scheme of survey and settlement.

192. The scheme of survey and settlement as originally sketched out is shown under the following 14 heads: (1) a revenue survey showing all the principal variations in the surface of the soil as hills, jungles, roads, channels, tanks, topes, houses, cultivated and cultivable lands, and also exhibiting accurately the sizes of the fields in these last two classes of land; (2) the minimum size of

fields was to be one acre of wet and two acres of dry land; interstitial holdings were to be treated as sub-divisions of such fields; (3) permanent boundary marks were to be established, and field, village and taluk maps prepared; (4) assessment was to be ryotwár; (5) the terms of the annual settlement made with each ryot were to vary simply with the area or quality of the lands held by the ryot, and his use or non-use of water from a Government source; (6) soils were to be divided into a few classes based on real tangible differences of composition; (7) the settlement officer was to estimate, as nearly as possible, the productive power of the land, stated in quantities of some one of the ordinary grain crops—paddy for irrigated lands, and cumbu, cholam or some other grain for unirrigated; these estimates (grain outturns) were to form the basis of the ultimate assessment; they were to be carefully made on such a scale as would allow for indifferent crops and bad seasons; (8) the land was then to be valued with regard to nearness of village roads, markets, irrigation facilities &c., and the field or village was to be classed accordingly; (9) the assessment was to be moderate; existing rates were generally based on 50 per cent. of the gross produce for wet and 33 per cent. for dry lands; Sir Thomas Munro's maximum was 30 per cent., and this was now adopted on the assumption that the average assessment would be about 25 per cent. of the gross produce; (10) the ryots' payment was to vary every 7 or 10 years with the commutation price of the standard crop to be calculated on the average of the prices prevailing during the previous 7 or 10 years; (11) it was believed that it would not be found necessary to divide the country for the purpose of official scales of prices, *i.e.*, one scale was to apply to the entire Presidency for the term adopted; but this principle was abandoned in practice, and the commutation prices of each district have been calculated independently; (12) the grain outturns were to be unalterable for a period of 50 years; (13) it was to be open to the ryot to compound for a fixed annual payment for a term of years; and (14) the Survey department and the Settlement department were to be separate, the former under a Surveyor General, the latter under a Superintendent of Settlement. The total cost was estimated at Rs. 76½ lakhs, spread over a period of 15 or 20 years. But this estimate has been greatly exceeded. Up to 31st March 1902, the total expenditure on revenue survey has been Rs. 2,44,47,895, and on Settlement Rs. 1,31,97,158; the result was expected to be an immediate loss of revenue consequent on the reduction of the Government share of the gross produce. But this was to be more than recouped by an extension of cultivation. This scheme was accepted in the main by the Court of Directors. Objections taken subsequently with regard to certain detailed points were decided at different times as enumerated below: (1) the restriction as to the size of fields has been removed; the maximum was once fixed at 2 acres for wet and 4 for dry land, but now, as a rule, each revenue-field (*i.e.*, each parcel of land on which previously a separate assessment was fixed) will form a survey-field; in exceptional cases two or more revenue-fields may be clubbed together subject to the following conditions: (*a*) every survey-field so formed must consist of entire revenue-fields; (*b*) no survey-field so united should exceed 6 acres of wet or 12 acres of dry land; (*c*) the revenue-fields forming a survey-field should be held on the same tenure; inám and ryotwari land should not be taken together; (*d*) no existing revenue-field need be divided, however large; (2) the assessment was to be made on the net produce, *i.e.*, after deducting the expenses of cultivation and a percentage for vicissitudes of season, unprofitable areas, &c.; in 1864, the Government share of the net produce was fixed by the Secretary of State at one-half; (3) the term of settlement was to be 30 years, *i.e.*, both grain outturns and commutation prices were to remain unalterable for that period; subsequently it was decided that at each settlement or re-settlement of a district, Government would fix at their discretion the period for which such settlement or re-settlement should be in force, and on the expiry of that period Government would revise the assessment in such manner as might then seem just and proper either with reference solely to a rise or fall in prices or with reference also to other considerations such as would require a reclassification of soils or a re-calculation of the grain outturns; (4) leases for a term of years at reduced rents were found to be unnecessary for the encouragement of large holdings; (5) another important question which came up for disposal at the time of the initial settlement of the districts of Gódávari and Kistna was the method to be adopted in assessing the additional amount to be paid, over and above the land assessment, for water supplied from Government irrigation sources, such as

Subsequent modifications.

the Gódávari and Kistna canals; in these two districts it was decided to impose an uniform charge of Rs. 4 per acre for irrigation supplied for a single crop, in addition to the land assessment, which was determined as if the land was unirrigated; it was desired to adopt a similar plan in all other districts where it was found practicable; as a matter of fact, however, the only other district in which the system has been introduced is Kurnool, in some parts of which irrigation is supplied from a canal which was originally worked by the Madras Irrigation Canal Company under a guarantee from Government, and the principle was maintained when the Company's works were taken over by Government; the land-assessments were fixed without reference to the facilities for irrigation; in districts subsequently settled, the assessment on irrigated lands was determined by a consideration of the value of the paddy (rice) crop grown on the best irrigated land, gradations of rates being formed to meet the conditions of inferior qualities of soil or defects in the sufficiency or regularity of the water-supply; this system of consolidated wet assessment was extended to the irrigated lands under the Gódávari and Kistna canals at the re-settlements of those districts; (6) formerly, it was the practice to charge the rates settled for irrigated lands, on lands irrigated by wells, where such wells were situated within a distance of ten yards of a Government source of irrigation, although Government had incurred no expense in sinking the wells; the justification for this course was that the wells derived their water-supply by percolation from the Government source; under recent orders, however, such lands are no longer assessed as irrigated, and the cultivator is allowed to enjoy the benefit of irrigation from his well free of any additional charge.

Constitution of the department.

193. The department consists at present of four Settlement parties, the usual strength of each Party being a Deputy Commissioner, an Uncovenanted Assistant, an office establishment costing on an average Rs. 608 a month, and one supervisor with a field establishment costing on an average Rs. 1,282 a month. Deputy Commissioners are classed in two grades, a first-class Deputy getting Rs. 1,100 a month and second-class Deputy Rs. 750. There are two appointments in each grade in the sanctioned scale; but at present only one officer is acting in the second grade. In one party there is an Assistant Commissioner, first grade, on Rs. 550 a month and in another party another Assistant Commissioner is acting in the second grade on Rs. 425 a month. In two parties there are now two Special Settlement officers and three Special Assistant Settlement officers. These five officers are members of the Indian Civil Service and are temporarily deputed for settlement work. Initial settlements having been completed in almost all districts, the work of resettlement in the future will, it is contemplated, be entrusted to specially selected district officers, both of the Imperial and of the Provincial Civil Service, and the special Settlement department will probably be abolished.

Procedure of Settlement.

194. The detailed operations performed by the Settlement department in effecting the settlement of a district are the following:—

Preliminary Investigation.

195. I. In the first instance it is necessary to obtain a general view of the characteristics of the district. Particulars of the climate, rainfall and physical features of such tracts or divisions as differ from each other distinctly have to be ascertained; information relative to its past history, its years of plenty or famine, its land-tenures, mode of taxation, and the causes of gradual progress has to be obtained from the Collector's records; the relative values of such sources of irrigation as the various tracts possess have to be estimated; a general idea of the prevailing soils must be acquired; at the same time information is gathered as to how different tracts are affected by roads, canals, markets, towns, hill-ranges or seaboard; the methods of cultivation pursued, the crops grown, the mode of disposal of surplus grain, the markets mostly frequented and the wages paid to labourers have to be inquired into. A district is, for administrative purposes, divided into taluks: each taluk has to be visited and the revenue officers and leading cultivators consulted.

Classification of soils.

196. II. Soils were divided by Mr. Newill into 5 great series: (1) the alluvial and exceptional, which includes the rich soils in the deltas of the great rivers, garden and other soils, permanently improved by long working; (2) the regar or regada, the so-called 'black-cotton' soil; (3) the red ferruginous soil originating from sandstone, laterite, &c.; (4) the calcareous soil, originating from

underlying strata of chalk or lime (of rare occurrence); and (5) the arenaceous soil (more or less pure sand on the sea coast, &c.). These series were adopted because they answer the requirements of being few, simple and well defined while they are universally acknowledged by the people themselves. Every soil of the series may contain varieties in physical constitution. Each one has some one distinctive mineral constituent which is capable of reduction to an impalpable powder. This contains the characteristic mineral nutritive element of the soil, and is for convenience (though not, of course, with scientific accuracy) spoken of as 'clay.' Now, each series may exhibit this material or 'clay' either pure or mixed with sand (as loam) or mixed with an excess of sand (sandy soil); and the difference affects the value of the soil because it makes it heavier or lighter, more or less permeable, liable to cake, or able to retain moisture. Each series is thus divided into classes, the exceptional into two—'alluvial' and 'permanently improved'—the others into three each, known as, 'clay,' 'loamy' and 'sandy.' The clay soils of each series are those containing more than two-thirds of clay, the loamy soils those with one-third to two-thirds clay and the rest sand, and the sandy soils those with more than two-thirds sand. So far the classification of soils proceeds, under fixed rules, according to their mechanical composition. Allowance is made for the presence of valuable or deleterious ingredients which affect the fertility of the soil by the sub-division of each class into 'sorts' according as the soil is 'good,' 'bad,' 'ordinary,' &c., of its kind. At first the number of sorts in a class was only two, but experience proved such a scale to be too inelastic and the number was increased first to three and then to five, viz., best, good, ordinary, inferior, worst. In determining the classification, the soil is turned up to the depth of about 9 inches. One yard is considered to be the proper depth for the surface soil; if it is less than this, the actual depth is noted as well as the nature of the sub-soil. Classification is made by classifiers under head classifiers and supervisors. The classification of each field is noted on the village map and in a register. It is usually found that soils run in considerable blocks round which a line can be drawn on the map. Inside the block small differences in a few scattered fields would be disregarded to avoid multiplying blocks.

Classification of fields.

197. A revenue system based on field-assessment seems to demand naturally and necessarily the separate classification of each individual field, and this is the sanctioned method of the department; it is, at the same time, laid down that though the details of classification extend to each field, the wider comparative view of the operations should never be lost sight of, as it is most desirable that the land should be viewed in a comprehensive way by the classifier. The detailed method of classification excited opposition at a very early period of the history of the department. Objection was taken to leaving the classification to men on low pay and it was proposed that the system of detailed field-classification should be replaced by a system of classification in blocks laid out by native officers, but valued by Europeans. It was pointed out in reply that the result would, in both cases, be practically the same, and the proposal was negatived as impracticable. The question was again revived in 1875, in connection with the settlement of certain villages of the Chingleput district. The method advocated there by the Director was that the officer conducting the settlement should lay out the land in blocks so similarly circumstanced in regard to soil, former assessment, cultivation, distance from village, tank, &c., that they might be safely assessed at the same average rate. Under this system, the classifier, instead of preceding the head of the party, was to follow him merely filling in details of registry for the lands inspected and laid out by the settling officer in consultation with the ryots. For this system, it was claimed that fraud was almost impossible, while the officer conducting the settlement had, from first to last, a perfect knowledge of every detail of the country with which he was dealing, and could afford to dispense with the voluminous returns invented as checks on low-paid subordinates. As a method of work, the Government have disapproved of the plan, but encourage blocking as a sequel to field-classification and as in fact an office arrangement made for the purpose of check and revision. In Malabar and South Canara however blocking even as a sequel to field-classification was not adopted as owing to the peculiar physical conditions of those districts the system was found to be inapplicable to them.

Grain-outturn.

198. III. The next stage is to ascertain what amount of crop each different class and sort of soil will produce. The same kind of crop is not always grown on the same

soil nor on the same field from year to year. It is necessary, therefore, to choose one or more standard grains (always food-grains, as food-products are the ultimate standards of values) to represent the general or average produce. The crop most extensively grown on irrigated lands is paddy (rice); on unirrigated (or dry) lands several varieties of food-grains are grown and the crop cultivated on the largest area according to the cultivation accounts is usually selected as the standard, or more often two crops are taken, the areas under other crops being for settlement purposes presumed to be cultivated with one or other of these according to the relative value of the crop. A fair average outturn of the standard grains is then ascertained per acre of each class and sort of soil, and this is called 'the grain outturn.' (The term 'grain-values' usually adopted in settlement reports has been discontinued as being misleading.) The criterion of such outturns is experience, and this is sought in experiments by officers of the department, in the knowledge acquired during long years of service by Tahsildars and similar responsible officers of Government, in the records of produce entered in the old village accounts, and in the admissions of the ryots. The actual experiments consist in reaping, threshing and measuring the crop upon small areas in selected fields. The number of experiments in some districts has exceeded two or even three thousand. The results are taken as a general guide to the grain-outturns and no more. The experimental reapings (or *kails* as they were called), however, are now to a great extent given up, and general inquiries and statistics already collected are relied on instead.

Commutation price.

199. The grain-outturns are next commuted into money. The commutation price is fixed on an average struck on the prices of a long series of years so as to ensure that the advantages of good and losses of bad years may be balanced, and to preclude all risk of the Government share of the produce being sold to the ryot at a price which he cannot always command; and a percentage allowance (formerly 10 and now generally 15 per cent.) is made for cartage of grain to markets and for merchants' profits. For all the earlier settlements, the average taken was based on the prices of the 20 years from 1845 to 1864. But since 1885 the period has, under the orders of Government, been altered into the twenty non-famine years immediately preceding each settlement. From the results obtained by applying the commutation rate a deduction of from * one-sixteenth to one-fourth is usually allowed on account of vicissitudes of season, and in view of the fact that the survey areas of fields include small extents of uncropped land, such as field-ridges, irrigation-distributaries, &c. Against the average value of the produce thus determined has to be set off the 'cost of cultivation,' the estimation of which used to be one of the most difficult and the most conjectural of the various steps in connection with a settlement. The items of cost usually included in the estimate were (1) ploughing cattle, (2) agricultural implements, (3) seed, (4) manure, and (5) labour required for ploughing, sowing, reaping, &c. The method of calculation varied according to the description of crops grown, and the method of culture, as well as according to the mode in which these items were paid in each district. In some, payments are made in grain, in others in money, and in some in both grain and money. The payments made in grain were converted into money at the commutation price adopted for the settlement. The cost of bullocks and of the implements of husbandry was distributed over the number of years during which they were estimated to be serviceable, and the other items were calculated for each year. Calculations were first made for the area which could be cultivated with one plough and one pair of bullocks, and the required calculations for an acre were deduced from them. The usual practice was to work out the expenses for the best soil, and then to diminish this standard proportionately according to the quality of soil. This method is open to objection on the ground that the cost of cultivating poor soils is greater if a maximum yield is sought therefrom than for superior soils. But it is to be borne in mind that the cultivator is content with a much smaller relative outturn from inferior soils and omits many processes such as repeated ploughings, manuring, weeding, and hoeing, which are resorted to on more fertile lands. Now the expenses of cultivation are taken to be the same as has been already determined in neighbouring settled districts.

Cost of cultivation.

* One-twentieth is allowed in the case of lands under first-class sources of irrigation in Nellore.

These expenses being deducted from the gross assets, *i.e.*, the value of the total outturn, the result is the approximate net produce of the land under examination, and half of this or more often rather less than half is taken as the Government demand. The 'straw' is usually taken as a set off against the item, 'feed of bullocks.'

Assessment.

200. The principle has always been that the assessment is to be moderate. The old rates were generally based on 50 per cent. of the gross produce for wet and 33 per cent. for dry land. When revision began the maximum was reduced to 30 per cent., the average assessment being about 25 per cent. But in the course of time a gross produce percentage was not considered sufficiently accurate. Net produce was to be ascertained by deducting the cost of cultivation, &c., as explained in the last paragraph and in 1864 the Government share or revenue was fixed at half the duly ascertained net produce. Recent calculations have shown that the ryotwari revenue actually collected at the present time is less than 10 per cent. of the gross produce.

Tarams.

201. For the sake of simplicity and to avoid multiplication of rates, the classes and sorts of soil which have been found by experience to yield alike or very nearly so are arranged in grades called 'tarams'; it follows that the values of half the net produce of the different classes and sorts of soil falling in the same grade are very nearly equal. Only one rate of assessment is therefore fixed for each grade, and, as far as possible, these rates are adjusted, so that the descent from the highest to the lowest may be by an uniform amount in each grade. As soils possess different productive powers when irrigated and dry, it is necessary to adopt two scales of tarams, one for wet lands and another for dry lands. A third scale of rates is necessary for the garden lands in Malabar and South Canara. As all villages have not the same advantages in respect of proximity to markets, facilities of communication, *e.g.*, roads, canals, railways, means of irrigation, or position with regard to the sea, or rivers, or hills, and the character of the subsoil, inequalities would arise if the same set of wet and dry rates were applied throughout the tract under settlement. Villages are, therefore, arranged in groups, generally two or three for a district according to circumstances, and the irrigation sources are arranged in classes; the rates of assessment are worked out as detailed above for the lands in the normal group of villages and under the normal class of irrigation, and are applied to those in the other groups and classes by being raised or lowered one grade as the case may be. Thus, the rate of assessment on good loamy black-cotton soil under first-class irrigation would be the same as that on the best loamy black-cotton soil under second-class irrigation. If sufficient water is obtainable, two crops of rice are frequently grown on 'wet' lands. In such cases, a charge equal to half the original assessment is made for the use of the additional supply of water. On unirrigated lands, the fixed assessment remains unaltered, whatever the number of crops raised may be, unless water be taken to irrigate a crop from a Government source, in which case a charge is made for the water so taken. Deductions are allowed if water has to be raised on to the fields by mechanical contrivances. No extra assessment is levied on account of the existence of wells, whether in 'wet' or 'dry' lands.

202. This system has gradually grown in simplicity and breadth. Taking all the settled districts there are at present not more than 41 rates in the wet scale ranging from Rs. 14 to As. 12 per acre and 24 in the dry varying from Rs. 7 to As. 2 per acre. In Malabar there are 7 garden rates ranging from Rs. 7 to Re. 1 per acre. At one time (in 1879) it was thought possible to draw up standard tables of rates including all classes and sorts of soil which could be applied at once to each field in a district as soon as the classification of the soil was known. It was suggested that instead of laboriously working up, as theretofore, to a table of rates, settlement operations in a new district should commence with the determination of such a table of rates as on consideration of the general conditions of the district, and of the rates adopted in other and neighbouring settled districts similarly conditioned might be deemed suitable. In pursuance of this suggestion, a standard table of rates, in which were embodied the more salient features of every settlement that had been made, was drawn up. Subsequently in 1884, when submitting proposals for the settlement of the Madura district,

Mr. Wilson, the Director of Settlement, tested this standard scale by working out rates for each class and sort of soil, taking the outturn and cultivation expenses from the sanctioned settlements of adjoining and similarly situated districts, and the commutation rates from the price returns of Madura district. The result showed that the process of verification adopted by the Director could not with safety be dispensed with. It was, therefore, resolved that for each district, the settlement of which is taken up in future, an independent scale should be worked out on the data supplied by the settlements of other similarly situated districts without reference to a standard scale.

Scheme of settlement.

203. The rates so determined and applied to the survey areas placed under each class and sort of soil give what are called the financial results of the new settlement for a village, taluk or district. Upon these data a scheme of settlement is drawn up by the Deputy Commissioner, in which he enters into full particulars of the political and revenue history of the tract or district under report, gives details of the physical features of the country, goes into statistics and resources, and discusses the several processes worked out by him in arriving at the results indicated above. He then argues as to the fairness of the revision of assessment proposed by him, and explains the causes which influenced the enhancement or diminution in assessment in any locality or localities as the case may be. These proposals are reviewed and revised, if necessary, by the Board of Revenue and Government. When a scheme of settlement has received the sanction of Government, a notification giving a brief summary of the principles on which the new money rates were worked out is prepared and published in the District Gazette.

Increment remissions.

204. In introducing the new rates the ryots are granted "increment remissions" in cases where the new assessment is greater than the old beyond a certain percentage; if the increase in individual cases exceeds 25 per cent. of the old assessment, the old assessment *plus* 25 per cent. of that assessment will be levied in the first year and the remainder remitted; in subsequent years, the assessment levied in the immediately preceding year *plus* $12\frac{1}{2}$ per cent. of the old assessment will be levied and the remainder remitted. If the full amount of the new assessment cannot be reached by the twelfth year, the balance remaining after levying 25 per cent. in the first year will be levied in equal instalments in the succeeding eleven years. Increases of Rs. 3 and less will be levied in the first year whatever the percentage may be.

Final operations.

205. Certain subsidiary matters connected with the assessment are then attended to. For instance, the area to be registered as entitled to irrigation under each source is finally revised, extended or curtailed as the state of water-supply renders it necessary. The interstitial holdings included by the Survey department in a single survey field are measured and distinguished by separate entries in the accounts. Opportunity is also taken to divide common lands, to allot grazing grounds, and to transfer lands improperly assessed as 'wet' to 'dry' and *vice versâ*. After the completion of these preliminaries, tickets, otherwise called rough pattás, are distributed to the ryots. A notice is affixed to each naming the time and place for the hearing of all objections to new entries and rates. On the day named in the notice, those who have cause for complaint appear with their village officers before the settling officer, and their complaints, as redressed or rejected, are entered in the settlement diary. The accounts are then corrected with reference to this final settlement, and the completed registers of each village with all names entered in the vernacular and in English are printed.

The Settlement Register.

206. This register, called the *Settlement Register*, is the foundation on which the whole revenue administration rests. It forms a complete 'Domesday book' recording accurate information regarding every separate holding, large or small. The area of each field is given in acres and cents or hundredths of an acre, and the assessment thereon is noted against it. A single field on the survey map may actually be divided amongst twenty ryots. In such a case there will be twenty sub-letters, and each ryot will have a separate sub-line in the register giving full particulars of his *holding*, even though the extent of it be no more than one-hundredth part of an acre. From the register is prepared a ledger known as the *chitta* which gives each ryot's personal account with Government. Every

field or fraction of a field held by the same ryot is picked out from the settlement register, and entered in this ledger under his name with particulars of the area, assessment and other details. The total of the areas shows the extent of his different holdings in the village, and the total of the assessments is the amount due thereon by him to Government. A copy of this, his personal account, is given to each ryot with a note as to the date on which each instalment falls due and is known as his *pattá*. An English descriptive memoir giving full details touching each village and its settlement, and an account of all lands held tax-free or on favourable tenure is also printed. A sketch map of the village showing the tanks and channels, and all similarly assessed fields laid out into blocks is attached to it. The descriptive memoirs of all the villages in each taluk consecutively numbered are bound into one or more volumes with their respective sketches and thus supply complete information regarding every village.

Patta.

207. The introduction of settlement is effected by the issue of pattás to those entitled to them, and this is one of the most important parts of the process of settlement. In the districts first settled, it was thought sufficient to issue pattás in the names of persons entered in the accounts as they then stood, but latterly, more has been done and many thousands of pattás have, after due inquiry, and where no civil disputes arise, been changed from the names of deceased ryots or vendors to those of the actual occupants of the lands exhibited in them. As an average district contains 157,000 Government ryots and 1,075,000 of fields, these proceedings have involved considerable labour. It may be noted that a settlement imposes not only an acreage charge on the lands then in a ryot's holding, but it fixes the charge on each acre of waste land which is likely to be cultivated or occupied at a subsequent time.

Jamabandi.

208. The duration of the settlements and re-settlements hitherto carried out is 30 years. During that period, neither the grain outturns nor the commutation rates are altered. But, as under the ryotwárí system, each cultivator is free to hold or relinquish whatever fields of his holding he likes, or to take up other available fields, and, as, under the circumstances described in paragraph 210 deductions are sometimes made from his total assessment, there must be an annual settling up to show what lands each ryot has actually held, and what amount, on all accounts, he has actually to pay for the year; his patta may be revised or he may, if necessary, be given a fresh patta every year. This process, which is called the annual settlement or *jamábandi*, is conducted not by the special department but by the ordinary revenue staff. In this way the information recorded in the settlement registers is kept corrected up to date, so that when the period of existing settlement expires and revision becomes requisite, it will in general merely be necessary to determine what the revised rates of assessment shall be, and to substitute these for the existing rates entered in the village accounts. In furtherance of this object, a new appointment was created in 1891 of a Deputy Director of Land Records, whose primary duty it was to see that the various accounts prescribed, and the record of holdings and cultivation are properly maintained. Measures are now being taken to bring the survey maps up to date. In December 1894 the appointment of Deputy Director of Land Records was abolished and the Deputy Director of Agriculture took charge of the duties of that appointment in addition to his own. The question of organizing a Land Records establishment is now under consideration.

Re-settlement.

209. Only two districts and a portion of a third district—viz., Trichinopoly, Gódávari and the Masulipatam portion of Kistna—have been re-settled up to date. In them only the delta portions were re-classified and new rates based on the results of such re-classification were introduced. In the upland portions only a percentage enhancement was made in the existing rates with reference to the increase in prices. It was once contemplated that after the existing assessments had been carefully revised, a settlement should be made which should be permanent both as regards 'grain outturns and commutation rates'; but this policy has now been formally abandoned. The time for re-settlement has already arrived in portions of Kurnool and Salem districts, and in the course of the next 10 years the fixed period will expire in Cuddapah, Ganjám, Nellore, Chingleput, Coimbatore and Tinnevelly and in portions of Kurnool, Salem, and Kistna districts.

The Remission Rules.

210. From what has been said above, it will be seen that, in the various calculations made in fixing the final money rates on each field, allowances are made for seasonal failure and various other agricultural risks. As a matter of policy, however, remissions either total or partial of these rates are granted, as a matter of grace, under executive instructions in cases of loss of crop. Such remissions have occasionally been allowed to cure mistakes in assessment, which the utmost care cannot always prevent; but relief on this ground is rarely required since Government are always ready and willing to correct, after a settlement has been introduced, any error which, in particular instances, may have led to over-assessment. The circumstances which render the grant of remissions expedient are the frequency of droughts or of immoderate rain, the enormous number of petty holdings, the improvidence of a large proportion of the cultivating class, and the undesirability of keeping arrears hanging over their heads for a series of years. Owing to the multiplicity of holdings and the general numerical weakness of the revenue staff enquiry into individual losses is often impracticable: and relief can usually be rendered only where the loss of crop can be readily located, estimated and verified; and it is essential that it should reach the ryot. These considerations have been kept in view in the rules actually issued from time to time. In the case of "wet" land which is of comparatively limited area and productive of comparatively valuable crops, total failure of the crop over the plots registered in the accounts and demarcated on the ground as separate fields, is a fact readily ascertained and verified: and the rules empower the Collector to remit the assessment in such cases in all years. In the case of failure, total or partial, of crops on "dry" land and the case of partial failure in "wet" land, whether this takes the form of an indifferent yield over a whole field or of a total failure of crop in parts of a whole field, the loss in particular fields is not only difficult to ascertain but its determination by subordinate officials is not susceptible of any satisfactory check. To meet these cases, therefore, an allowance is made at settlement in reduction of the assessment which practically meets the losses of all but exceptionally unfavourable seasons. To provide for the calamities of exceptionally bad years the rules allow of a proportionate remission of assessment uniform over tracts where the crops have suffered in a marked degree. The remission rules as stated above are executive instructions, liable to be altered from time to time at the pleasure of the Government.

Settlement of Inam claims.

211. The settlement as described above only applies to the land under ryotwári tenure. If, however, there is land in the village, consisting of a few fields, or even a division of the village, held revenue free, or at a reduced rate, such an area is shown in the village registers. But it may be that a whole village is *inám*. If so, it constitutes a separate estate, and does not come within the scope of the settlement. Government has no claim to the land, or to the revenue unless there is a fixed quit-rent, which is recorded as is the permanently-settled revenue or "peshkash" of the zamíndarí estate. There was accordingly a special Commission, under which the right and title of the holders of these favoured estates was investigated and settled as described in paragraph 132.

Land Revenue.

212. The demand of land-revenue for the fasli ending 30th June 1901 under the different kinds of settlement above described was as under—

	Rs.
Zamíndárí	50,06,113
Ryotwári, including miscellaneous revenue	4,93,53,832
Whole inám villages	7,40,255
Minor ináms	22,96,539
Total ...	5,73,96,739

Cost of Settlement operations.

213. The following statement exhibits the expenditure incurred in each district by the Survey and Settlement departments from the commencement of the operations up to the end of the official year 1901–1902 and the financial results of the ryotwári settlement for the revenue year ending with 30th June 1901 in the districts in which the operations of these departments have been completed. There was a

net increase of over 77·5 lakhs of rupees in the revenue, that is, a return of 23·5 per cent. on the total outlay :—

Districts.	Years of settlement or resettlement.	Outlay.		Financial results.		
		Survey Department.	Settlement Department.	Demand prior to settlement or resettlement.	Demand in fasli 1310.	Increase or decrease.
Original Settlement completed.		RS.	RS.	RS.	RS.	RS.
Ganjám	1878-80 and 1883-84.	9,03,419	3,96,007	6,66,409	8,76,019	+ 2,09,610
Vizagapatam	1889-90	7,00,325	1,56,094	3,82,161	4,57,584	+ 75,423
Gódávari	.....	6,79,210	3,35,609	...	...	...
Gódávari rented and hill villages.*	1899-00	29,001	...	...	...	...
Kistna (Guntúr portion).	1873-74	10,19,065	6,06,515	24,33,981	35,98,743	+11,64,762
Nellore	1873-75	6,27,776	6,08,152	17,65,004	22,60,050	+ 4,95,046
Cuddapah	1874-75 and 1877-83.	15,17,443	12,72,140	15,84,484	17,98,972	+ 2,14,488
Kurnool	1865-69, 1872-75 and 1877-78.	10,42,451	5,59,846	13,26,436	14,29,141	+ 1,02,705
Chingleput	1875-78	9,50,095	4,35,617	13,86,814	16,64,272	+ 2,77,458
North Arcot	1881-86	8,68,570	9,35,822	19,46,556	21,82,746	+ 2,36,190
Trichinopoly	.....	2,83,531	3,86,148	...	...	...
Madura	1885-89 and 1892-93.	13,97,234	5,40,610	16,69,449	20,99,391	+ 4,29,942
Tinnevelly	1873-78	9,53,328	7,06,602	25,15,165	28,06,881	+ 2,91,716
Coimbatore	1878-82	15,01,985	7,43,154	25,51,819	29,24,736	+ 3,72,917
The Nílgiris (including Wynaad).	1884-87 and 1889-90.	11,01,654	1,23,284	77,329	1,35,068	+ 57,739
Salem	1870-74	8,77,977	6,19,708	17,76,911	19,80,399	+ 2,03,488
Malabar (Wynaad) ...	1888-89	8,12,858	1,67,014	82,654	1,41,672	+ 59,018
South Arcot	1887-93	11,87,347	7,81,127	35,84,962	40,93,239	+ 5,08,277
Bellary	1890-94	12,04,667	4,94,410	13,30,282	15,50,807	+ 2,20,525
Tanjore	1893-94	14,49,880	8,97,897	41,52,855	57,63,815	+16,10,960
Anantapur	1891-92 and 1896-98.	10,23,380	5,12,371	10,39,869	10,51,594	+ 11,725
	Total ...	2,01,37,196	1,12,78,127	3,02,73,140	3,68,15,129	+65,41,989
Resettlement completed.						
Trichinopoly	1894-95	1,59,986	1,36,514	16,21,577	20,72,562	+ 4,50,985
Gódávari	1899-00	2,40,805	3,84,030	35,02,221	40,58,364	+ 5,56,143
Kistna (Masulipatam portion).	1899-00	5,26,469	1,64,849	12,90,807	14,95,615	+ 2,04,808
	Total ...	9,27,260	6,85,393	64,14,605	76,26,541	+12,11,936
	Grand Total ...	2,10,64,456	1,19,63,520	3,66,87,745	4,44,41,670	+77,53,925

* Particulars relating to the initial settlement of the rented and hill villages of the Gódávari district are included in those for the resettlement of the whole district.

Initial settlement operations were in progress at the close of the official year 1901–1902 in the districts of Malabar and South Canara and when they are settled the initial settlement of the whole Presidency will be complete.

Law.

214. With the exception of Regulation XXV of 1802 under which the permanently-settled estates were constituted, there are no legal enactments specially affecting Settlement officers. They work under departmental rules. The jurisdiction of Civil Courts over questions affecting the rates or amount of assessment is saved by section 58 of Act II of 1864 (The Revenue Recovery Act).

CIVIL DIVISIONS OF THE BRITISH TERRITORY.

The Presidency. *28 & 29 Vic., c. 17.*

215. The power to declare and appoint by proclamation the territorial limits of the Presidency is vested in the Governor General of India in Council, but the Secretary of State has the power to disallow any such proclamation; if, however, an entire zilla or district is transferred from one Presidency to another, the previous sanction of the Crown is necessary to render the proclamation valid.

The Scheduled Districts.

216. The scheduled districts include the agency tracts in Ganjám, Vizagapatam and Gódávari and the Laccadive Islands including Minicoy. Information regarding the area, population, etc., of the agency tracts will be found in the appendix at pages 214 and 215.

General Administration.

217. The jurisdiction of every member of the Board of Revenue includes the whole Presidency; there are no officers corresponding to Commissioners in other provinces who have control over the heads of a few districts. The Presidency is divided into 22 districts for the purposes of general executive administration, each under the charge of a District Collector and Magistrate. The agency tracts are administered by the Collectors of the districts to which they are attached in their capacity as Agents to the Governor. Each district is divided into "divisions" and "taluks." The tables given in the appendix show some details relating to districts, divisions and taluks, and show what groups of districts are included in such terms as "the northern circars," "the ceded districts," etc. A few remarks about the area and population of the districts will be found in paragraph 8 of Chapter VI (Details of census). In some taluks a portion of the taluk is placed under the charge of a deputy tahsildar. Each taluk is divided into three or four "firkas." The absolute unit for administrative purposes is the "village"; a village has definite boundaries fixed by Government; it may contain one or more hamlets; it corresponds to some extent to a "parish" in England. A district surveyor is generally employed in each district under the orders of the Collector.

Protection. Police.

218. For the administration of the Police department, the Presidency, except the city of Madras, is divided into three "ranges"—northern, central and southern—each under a Deputy Inspector General of Police; the northern range includes the northern circars and Nellore; the ceded districts, North and South Arcot, Chingleput and Salem form the central range; the remaining districts are included in the southern range. The city of Madras is under a Commissioner of Police. In each district is a district superintendent and in most districts assistant district superintendents have independent local charges under the general control of the district superintendent who again is responsible for the working of the police in the district to the District Magistrate.

Criminal Justice. *28 & 29 Vic., c. 15; India Act X of 1897, s. 3 (41).* *55 Geo. 3, c. 84.*

219. The limits of the jurisdiction of the High Court may be altered by an order of the Governor General in Council, but the Crown may disallow any such order. Its appellate and revisional jurisdiction over the ordinary courts extend throughout the Presidency. The High Court exercises ordinary original criminal jurisdiction in the Presidency town. In every other district there is a sessions judge except in the Nilgiris and in Anantapur; the sessions judge of Coimbatore exercises criminal jurisdiction in the Nilgiris; two taluks of Anantapur district are within the local jurisdiction of the judge at Kurnool and the other six taluks are within that of the judge at Bellary; in Malabar there are two sessions judges, one for North Malabar and the other for South Malabar. The district collector is also district magistrate in all districts except Madras; the Presidency magistrates exercise jurisdiction within the Presidency town, the limits of which can be extended by the Governor in Council. Divisional officers are sub-divisional magistrates for their divisions and the criminal jurisdiction of sub-magistrates is generally coterminous with a taluk or similar area.

Prisons.

220. There are no officers intermediate between the Inspector General of Prisons and the superintendents of jails.

Civil Justice.

221. The appellate jurisdiction of the High Court as a civil court is coterminous with the Presidency, but in certain cases tried by the courts of the Agents in the

scheduled districts, the appeals lie to the Governor in Council and not to the High Court. The latter exercises ordinary original civil jurisdiction within the limits of its ordinary original criminal jurisdiction. Elsewhere sessions judges are district judges for the areas within their criminal jurisdiction, but the district judge of Kurnool, instead of the district judge of Bellary, exercises civil jurisdiction in the Adóni taluk of Bellary district; in a few districts subordinate judges are appointed with jurisdiction over portions of the district. The local jurisdiction of the Madras City Civil Court and of the Madras Small Cause Court is the same as the ordinary original civil jurisdiction of the High Court. There are 118 district munsifs; there is only one district munsif in the Nilgiri district, but there are twelve in South Malabar; there are usually four or five under each district judge.

Registration of Assurances.

222. There is generally a district registrar of assurances for each district, but there is only one district registrar for the two districts of Madras and Chingleput, and one for the two districts of Anantapur and Bellary; on the other hand, there are two district registrars in Malabar, one for South Malabar and the other for North Malabar. The district registrars are subordinate directly to the Inspector General of Registration. There is generally a sub-registrar's office at the head-quarters of each tahsildar or deputy tahsildar.

Local Boards.

223. The area under a district board is a revenue district excluding the agency tracts except those in Gódávari. The area under a taluk board is usually coterminous with a division of a district; but the area under the Berhampur taluk board in Ganjám district includes the two divisions of Berhampur and Chatrapur and there are two taluk boards in each of the Tirumangalam and Ramnad divisions of Madura district. There are no taluk boards in the Nilgiris and in the Cochin division of Malabar district. The areas under the control of taluk boards and union panchayats are notified by the Governor in Council. A union is generally five or six square miles in extent except in the ceded districts and Nellore; in those districts and in some instances in other districts the areas of unions are much greater; the area of the smallest union (Rénigunta in North Arcot district) is 0·03 square mile while the area of Gudur union in Nellore district is returned as 61 square miles. The boundaries of the city of Madras or of any district municipality may be declared or altered by the Governor in Council.

Municipalities.

Military (Volunteering).

224. For purposes of inspection detachments of volunteers are under the General Commanding the Military district in which their head-quarters may be situated. Bellary and Gooty are in the Belgaum district; the Bangalore district includes Mysore, Coorg and Salem; Malabar, the Nilgiris, Coimbatore, Trichinopoly, Tanjore, Madura and Travancore are in the southern district, of which the head-quarters are at Wellington; the Madras district includes the northern circars, Chingleput, Madras and North Arcot.

Marine.

225. The Presidency Port Officer is in charge of all the ports in the Presidency, the local port officers stationed at other ports being officially under his control.

Production and Distribution.

Forests.

226. For the administration of the Forest department, the Presidency is divided into three "circles." The northern circle includes the northern circars and the ceded districts except Cuddapah; the central circle comprises Cuddapah, Nellore, Chingleput, North and South Arcot, Salem, Trichinopoly and Tanjore; Coimbatore, the Nilgiris, the west coast and southern districts except Tanjore form the southern circle. There is one district forest officer in each district except in Salem, Malabar and Coimbatore, in each of which there are two, and in Trichinopoly and Tanjore, for both of which only one district forest officer is appointed. Other deputy and assistant conservators are sometimes given local charges under the control of the district forest officer, who is regarded as the assistant to the district Collector for forest purposes.

Public Works.

227. For the purposes of the Public Works department the Presidency is divided into six "circles," each of which is under the charge of a Superintending Engineer. No. I circle includes the northern circars except the Kistna district; the districts of Nellore and Kistna constitute No. II circle; No. III circle comprises the ceded districts. The Nilgiris, the west coast districts and the central districts except Trichinopoly are included in circle No. IV; Chingleput, South Arcot and Tanjore districts form circle No. V and the remaining 3 districts—Trichinopoly, Madura and Tinnevelly—constitute No. VI circle. Each circle is divided into

"divisions"; a division is generally a revenue district, but there are three divisions in Gódávari, three in Kistna and two in Tanjore on account of the delta irrigation systems; the two west coast districts constitute one division and the districts of Anantapur and the Nilgiris are included in the divisions of Bellary and Coimbatore respectively. The lighthouses and the presidency workshops are two separate divisions; Madras constitutes the Consulting Architect's division; these three divisions are not included in any circle.

Revenue and Finance.
Salt, Abkári and Separate Revenue Department.

228. The land revenue of each district is collected and administered directly by the Collector, his Assistants, Deputies and Tahsildars. For the whole Presidency there are three Deputy Commissioners of the Salt, Abkári and Separate Revenue department, each in charge of a division; the northern division comprises the northern circars and Nellore district; the central division includes the ceded districts, North and South Arcot, Salem, a portion of Tanjore district and the Carnatic districts except Nellore; the remainder of the Presidency forms the southern division. The three divisions are divided into twelve sub-divisions which vary considerably in size. The sub-divisions are again divided into 76 circles, some including four or five taluks and others comprising smaller areas.

Vital Statistics and Medical Services.
Emigration.
Medical.
Sanitation.
Vaccination.

229. The Collector of Madras is the Protector of Emigrants throughout the Presidency. For each district there is a district medical and sanitary officer who is officially under the control of the Surgeon General and of the Sanitary Commissioner. In addition to the Sanitary Commissioner there is also a Deputy Sanitary Commissioner and Inspector of Vaccination for the Presidency. Deputy inspectors of vaccination and sanitary inspectors are in the employ of district boards and municipal councils.

Instruction.

230. For the purposes of inspection of boys' schools by officers of the Educational department, the Presidency is divided into four circles. The northern circle comprises the northern circars; the ceded and the Carnatic districts except South Arcot are included in the central circle; the southern districts with North and South Arcot and Trichinopoly form the southern circle; the western circle includes the west coast districts, Coimbatore, the Nilgiris and Salem. The southern circle comprises three "divisions" and the other circles include two divisions each. The number of "ranges" in a division varies from four to eight. A range generally includes the local jurisdiction of one or more taluk boards. The area under a supervisor of primary schools is usually one or two taluks. The three circles into which the Presidency is divided for purposes of inspection of girls' schools are called the northern, central and southern circles. The northern circle consists of the northern circars and the ceded districts except Cuddapah; the central circle includes the Carnatic, Cuddapah, North Arcot and Salem; and the southern circle comprises the southern and west coast districts and Coimbatore, Trichinopoly and the Nilgiris.

APPENDIX I.

	Districts.	Total area.*	Population (1901).	Area of zamindari and whole inam villages.	Area of land in ryotwari villages cultivated in fasli 1310.	Area of land shown in column 5 which was irrigated.	† Average revenue for the three years ending 1901-1902. Land revenue and cesses (agricultural year). Ryotwari.	Zamindari and whole inam.
	1	2	3	4	5	6	7	8
		SQ. MILS.		SQ. MILS.	SQ. MILS.	SQ. MILS.	LAKHS.	LAKHS.
Circars	1. Ganjám	8,372	2,010,256	3,833	673	340	11·22	6·77
	2. Vizagapatam.	17,222	2,933,650	15,764	282	121	6·73	12·52
	3. Gódávari	7,072	2,301,759	3,528	1,554	1,007	61·48	9·53
	4. Kistna	8,498	2,154,803	2,173	3,234	709	67·66	3·67
Deccan	5. Kurnool	7,578	872,055	212	2,952	157	18·28	·13
	6. Bellary	5,714	947,214	208	3,345	98	19·45	·16
	7. Anantapur	5,557	788,254	222	2,239	231	12·22	·17
	8. Cuddapah	8,723	1,291,267	432	2,369	418	21·27	·44
Carnatic	9. Nellore	8,761	1,496,987	4,224	1,633	450	26·38	6·06
	10. Chingleput	3,079	1,312,122	949	871	556	18·83	2·62
	11. Madras	27	509,346	1	...	...	1·10	...
	12. South Arcot.	5,217	2,349,894	128	2,212	723	45·55	·37
Central	13. North Arcot.	7,386	2,207,712	3,297	1,167	494	23·52	4·32
	14. Salem	7,530	2,204,974	1,848	1,981	290	21·81	5·47
	15. Coimbatore	7,860	2,201,752	217	3,483	612	33·20	·39
	16. Trichinopoly.	3,632	1,444,770	813	1,366	306	23·13	·94
Southern	17. Tanjore	3,710	2,245,029	562	1,664	1,245	62·48	2·20
	18. Madura	8,701	2,831,280	5,312	1,468	409	24·25	10·09
	19. Tinnevelly	5,389	2,059,607	1,726	1,695	435	30·36	4·32
West Coast	20. Malabar	5,619	2,790,281	...	1 469	60	24·20	...
	21. South Canara.	4,025	1,134,713	...	650	...	15·48	...
...	22. The Nilgiris.	957	111,437	...	106	...	1·51	...
	Total	141,529	38,199,162	45,449	36,413	8,661	570·11	70·17

	Districts.	† Average revenue for the three years ending 1901–1902. Assessed taxes (official year).	Stamps (official year).	Registration (official year).	Excise (official year).	Salt (official year).‡	Forests (forest year).	Customs (official year).	Local Boards (excluding opening balances and debt heads).
		9	10	11	12	13	14	15	16
		LAKHS.	LAKHS.	LAKHS.	LAKHS.	LAKHS.	LAKHS.	LAKHS.	LAKHS.
Circars	1. Ganjám	·73	2·24	·26	3·24	31·53	·55	·25	3·72
	2. Vizagapatam.	1·02	2·78	·28	6·66	14·21	·35	·08	4·15
	3. Gódávari	1·58	5·93	·85	13·05	11·29	1·90	1·21	8·43
	4. Kistna	1·75	4·76	·62	9·09	12·29	1·33	·61	6·74
Deccan	5. Kurnool	·45	1·50	·30	4·16	...	1·65	...	1·98
	6. Bellary	·68	1·21	·31	6·39	...	1·35	...	2·38
	7. Anantapur	·37	·94		5·43	...	·80	...	1·57
	8. Cuddapah	·72	1·94	·25	2·74	...	1·20	...	2·64
Carnatic	9. Nellore	·99	2·61	·29	2·93	21·63	1·71	...	3·19
	10. Chingleput	·56	2·18	·72	3·54	40·42	·43	...	2·77
	11. Madras	5·36	‖ 8·05		12·94		...	28·67	...
	12. South Arcot.	·74	3·71	·79	6·60	9·62	1·02	·54	4·22
Central	13. North Arcot.	1·13	3·30	·63	6·87	...	1·28	...	3·90
	14. Salem	·75	3·15	·59	8·55	...	3·10	...	4·20
	15. Coimbatore	·75	4·11	·92	7·76	...	** 1·99	...	4·71
	16. Trichinopoly.	·66	2·96	·55	3·99	...	·80	...	3·07
Southern	17. Tanjore	1·43	8·56	1·15	9·62	15·57	·20	3·32	12·88
	18. Madura	2·74	7·14	1·39	6·29	6·14	·89	·12	6·34
	19. Tinnevelly	1·50	6·05	1·49	4·30	30·90	·79	2·50	4·92
West Coast	20. Malabar	1·23	8 88	1·91	5·96	...	†† 1·77	·78	4·83
	21. South Canara.	·57	2·78	·46	4·36	...	·61	·55	2·50
...	22. The Nilgiris.	·48	·50	·06	2·96	...	·46	...	1·55
		§ ·20	¶ ·04						
	Total	26·39	85·32	13·82	137·43	193·60	24·18	‡‡ 38·63	90·69

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given in this statement may not be absolutely accurate.

† This statement is not intended to show the revenue actually paid into each district treasury, but the revenue due in each district and collected either in the district or elsewhere.

‡ Represents duty at Rs. 2-8-0 per maund on the average sales at the factories in each district.

§ Revenue under "Salt account."

‖ Includes receipts in the General Stamp Office.

¶ Represents revenue from Bangalore and Travancore and from "Salt account."

** Coimbatore is divided into two divisions for forest purposes, viz., North and South Coimbatore; the revenue in the former being Rs. 1·17 lakhs and that in the latter Rs. ·82 lakh.

†† Malabar is divided into two divisions for forest purposes, viz., North and South Malabar; the revenue in the former being Rs. ·44 lakh and that in the latter Rs. 1·33 lakhs.

‡‡ Exclusive of the Customs duty on Salt (Rs. ·17 lakh).

APPENDIX II.

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Ganjám (Chatrapur). (District Judge's head-quarters, Berhampur.)	1. Chicacole† (Chicacole).	Chicacole (including Naupada salt-pans).	302	249,825	3·21	4	140	2	Chicacole ...	18,196
		Parlákimedi Agency (Z).	972	311,534	·90	2	365	2	Parlákimedi ...	17,386
		Tekkali (Z) (41 Zamindari tracts).	396	124,626	1·00	...	...	1	.....	...
		Total ...	1,670	685,985	5·11	6	505	5		
	2. Berhampur† (Berhampur).	Berhampur (including Mohiri hills and Ganjám salt-pans).	526	344,368	4·93	6	387	6	Berhampur ...	25,729
		Peddakimedi (Z); Surangi (Z); Mandaga (Z); Mandasá Agency, &c. (10 Zamindaries and 4 Maliah tracts).	738	186,190	·86	1	...	1	.....	...
		Total ...	1,264	530,558	5·79	7	387	7		
	3. Gumsur (Russellkonda).	Gumsur ...	1,162	200,357	3·09	6	625	3	.....	...
		Dharakota, Bodaguda and Chinnakimedi (Z) and Pondakkal Agency tracts (7 Zamindari and 1 Agency tract).	546	139,113	·68	4	...	...	.....	...
		Total ...	1,708	339,470	3·77	10	625	3		
	4. Balliguda† (Russellkonda).	Gumsur Agency tracts; Chinnakimedi Agency tracts; Peddakimedi; Bodaguda and Surangi Agency tracts.	3,128	255,965	·01	...	482	...	.....	...
		Total ...	3,128	255,965	·01	...	482	...		
	5. Chatrapur (Chatrapur).	Kallikota (5 Zamindaris).	602	198,278	·83	1	...	...	.....	...
		Total ...	602	198,278	·83	1	...	...		
		Aild shrotriyamjodi and cesses.	...	...	·49	...	...	...		
		Permanently-settled revenue and cesses.	...	...	1·82	...	...	...		
		Other items for which details for each taluk are not available.	...	...	·02	...	...	...		
		Grand Total ...	8,372	2,010,256	17·84	24	1,999	15		
Vizagapatam (Vizagapatam).	1. Vizianagram† (Vizianagram).	Palkonda ...	334	215,376	2·56	4	127	1	.....	...
		Palkonda Agency tracts.	168	11,245		...	111	...	.....	...
		Chipurupalle (Z).	549	170,532	...	1	...	3	.....	...
		Gajapatinagaram (Z).	333	134,553	...	1	...	1	.....	...

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given here may not be absolutely accurate.

† Divisions in charge of officers of the Indian Civil Service.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310.)	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
				LAKHS.						
Vizagapatam (Vizagapatam)—*cont.*	1. Vizianagaram † (Vizianagaram)—*cont.*	Vizianagram (Z).	294	185,670	...	1	...	...	Vizianagram ...	37,270
		Bimlipatam (Z).	207	126,354	...	1	...	...	Bimlipatam ...	10,212
		Total ...	1,885	843,730	2·56	8	238	5		
	2. Párvatípuram † (Párvatípuram).	Bobbili (Z) ...	268	133,577	...	1	...	1	.....	...
		Sálúr (Z) ...	180	92,717	...	...	...	1	.....	...
		Sálúr Agency tracts (Z).	200	5,126	...	...	...	...	.....	...
		Párvatipuram (Z).	401	116,533	...	1	...	1	.....	...
		Párvatípuram Agency tracts (Z).	398	43,990	...	...	...	...	.....	...
		Gunupur Agency tracts (Z).	2,560	113,682	...	...	...	...	.....	...
		Rayagada Agency tracts (Z).		86,610	...	...	...	...	.....	...
		Bissemkatak Agency tracts (Z).		59,445	...	...	...	...	.....	...
		Total ...	4,007	651,680	...	2	...	3		
	3. Narasapatnam † (Narasapatnam).	Golgonda ...	525	123,507	1·69	4	76	1	.....	...
		Golgonda Agency tracts.	738	33,929		...	401	...	.....	...
		Sarvasiddhi ...	341	160,761	1·90	3	75	1	.....	...
		Viravalli (Z) ...	424	209,228	...	1	...	2	.....	...
		Viravalli Agency tracts (Z).	131	7,590	...	...	...	...	.....	...
		Anakápalle (Z).	297	165,478	...	1	...	1	Anakápalle ...	18,539
		Total ...	2,456	700,493	3·59	9	552	5		
	4. Koraput † (Koraput).	Nowrangapur Agency tracts (Z).	2,172	104,145	...	...	...	...	.....	...
		Jeypore Agency tracts (Z).	1,016	133,881	...	...	...	...	.....	...
		Koraput Agency tracts (Z).	671	73,818	...	...	...	...	.....	...
		Malkangiri Agency tracts (Z).	2,396	35,856	...	...	...	...	.....	...
		Pottanghi Agency tracts (Z).	625	73,013	...	...	...	...	.....	...
		Padwa Agency tracts (Z).	1,383	64,415	...	...	...	...	.....	...
		Total ...	8,263	485,078	...	...	...	...		
	5. Vizagapatam (Vizagapatam).	Vizagapatam (Z).	173	110,652	...	...	...	...	Vizagapatam ...	40,892
		Srungavarapukota (Z).	274	137,724	...	1	...	2	.....	...
		Srungavarapukota Agency tracts (Z).	164	4,293	...	...	...	...	.....	...
		Total ...	611	252,669	...	1	...	2		
		Add zamindari and other collections.	...	...	13·15	...	...	...		
		Grand Total ...	17,222	2,933,650	19·30	20	790	15		

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given here may not be absolutely accurate.

† Divisions in charge of officers of the Indian Civil Service.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Godávari (Cocanada), (District Judge's head-quarters, Rajahmundry.)	1. Rajahmundry † (Rajahmundry).	Rajamundry ...	350	161,070	2·96	3	83	1	Rajahmundry ...	36,408
		Amalápuram ...	506	277,445	8·39	5	111	2	.....	...
		Rámachandrapuram.	296	220,356	12·23	5	131	5	.....	...
		Total ...	1,152	658,871	23·58	13	325	8		
	2. Ellore † (Ellore).	Ellore	778	181,035	4·15	3	88	2	Ellore	33,521
		Yernagúdem ...	568	140,048	2·03	3	276	1	.....	...
		Tanuku	371	238,758	10·34	5	88	3	.....	...
		Total ...	1,717	559,841	16·52	11	452	6		
	3. Polavaram (Polavaram now at Rajahmundry as a temporary measure).	Polavaram Agency.	564	58,274	·30	2	...	...	.....	...
		Bhadráchalam Agency.	911	48,658	·05	3	90	...	.....	...
		Yellavaram Agency.	950	29,621	·16	1	...	...	.....	...
		Chodavaram Agency.	715	23,229	·02	1	...	...	.....	...
		Total ...	3,140	159,842	·53	7	90	..		
	4. Narasapur (Narasapur).	Narasapur ...	433	254,961	10·08	6	120	3	.....	...
		Bhímavaram ...	325	144,615	7·07	5	88	2	.....	...
		Total ...	758	399,576	17·15	11	208	5		
	5. Cocanada (Cocanada).	Peddapuram ...	594	167,020	2·29	4	64	3	.....	...
		Cocanada ...	294	213,758	5·05	3	‡	1	Cocanada ...	48,096
		Pithápuram (Z).	191	84,089	2·44	...	...	1	.....	...
		Tuni (Z) ...	126	58,762	·34	...	...	2	.....	...
		Total ...	1,205	523,629	10·12	7	64	7		
		Grand Total ...	7,972	2,301,759	67·90	49	1,139	26		
Kistna (Masulipatam).	1. Guntúr † (Guntúr).	Tenali	644	288,127	15·32	7	131	4	.....	...
		Bápatla	679	213,456	10·23	5	105	4	.....	...
		Guntúr	500	200,557	4·92	3	105	1	Guntúr	30,833
		Sattenapalle ...	714	159,645	4·40	3	156	1	.....	...
		Total ...	2,537	861,785	34·87	18	497	10		
	2. Bezwada † (Bezwada).	Nandigáma ...	677	139,958	2·84	3	118	1	.....	...
		Bezwada ...	422	124,170	2·61	3	62	3	Bezwada ...	24,224
		Nuzvid (Z) ...	789	188,761	4·23	4	...	2	.....	.....
		Tiruvur (Z) ...	338	69,219	·21	...	...	1	.....	.....
		Total ...	2,226	522,108	9·89	10	180	7		
	3. Narasaraopet (Narasaraopet).	Vinukonda ...	646	82,493	1·81	3	49	1	.....	...
		Narasaraopet ...	713	168,547	4·20	3	94	2	.....	...
		Palnad	1,041	153,638	4·20	3	88	1	.....	...
		Total ...	2,400	404,678	10·21	9	231	4		
	4. Masulipatam (Masulipatam).	Bandar	740	214,316	4·77	5	75	3	Masulipatam ...	39,507
		Gudiváda ...	595	151,916	10·81	6	171	2	.....	...
		Total ...	1,335	366,232	15·58	11	246	5		
		Grand Total ...	8,498	2,154,803	70·55	48	1,154	26		
Kurnool (Kurnool).	1. Nandyal † (Nandyal).	Nandyal ...	854	110,292	2·70	4	92	3	Nandyal ...	15,137
		Sirvel	613	73,387	2·23	4	88	1	.....	...
		Koilkuntla ...	572	88,147	3·04	3	84	2	.....	...
		Total ...	2,039	271,826	7·97	11	264	6		

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given here may not be absolutely accurate.

† Divisions in charge of officers of the Indian Civil Service.

‡ Included under Ramachandrapuram.

(Z) denotes Zamindari divisions.

APPENDIX II – *continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Kurnool (Kurnool)—*cont.*	2. Kurnool (Kurnool).	Pattikonda ...	1,134	143,033	2·84	4	99	4	.....	...
		Ramallakot ...	846	142,855	2·45	4	100	2	Kurnool ...	25,376
		Total ...	1,980	285,888	5·29	8	199	6		
	3. Markapur (Markapur).	Cumbum ...	1,061	115,881	1·78	3	75	1	.....	...
		Markapur ...	1,140	94,293	1·05	4	64	1	.....	...
		Total ...	2,201	210,174	2·83	7	139	2		
	4. Nandikotkur (Kurnool).	Nandikotkur ...	1,358	104,167	2·88	4	97	3	.....	...
		Total ...	1,358	104,167	2·88	4	97	3	.....	...
		Add shrotriyam-jodi and cesses.	...	...	·12	...	...	...	.....	...
		Grand Total ...	7,578	872,055	19·09	30	699	17		
Bellary (Bellary).	1. Hospet † (Hospet).	Hospet	540	101,947	2·15	4	105	4	.....	...
		Kúdligi	863	103,985	1·41	4	108	2	.....	...
		Hadagalli ...	585	92,094	1·77	3	83	1	.....	...
		Harpanahalli ...	611	95,646	1·57	3	71	1	.....	...
		Total ...	2,599	393,672	6·90	14	367	8		
	2. Ádóni (Ádóni).	Ádóni	839	178,784	3·23	4	180	3	Ádóni	30,416
		Alúr	686	98,568	3·97	3	100	2	.....	...
		Total ...	1,525	277,352	7·20	7	280	5		
	3. Bellary (Bellary).	Bellary	962	193,401	4·17	4	156	4	Bellary ...	58,247
		Rayadrug ...	628	82,789	1·67	3	68	2	.....	...
		Total ...	1,590	276,190	5·84	7	224	6		
		Add shrotriyam-jodi and cesses.	...	...	·15	...	...	...		
		Grand Total ...	5,714	947,214	20·09	28	871	19		
Anantapur (Anantapur).	1. Penukonda† (Penukonda).	Penukonda ...	677	92,482	1·36	3	79	2	.....	...
		Hindupur ...	426	92,088	1·53	3	50	1	.....	...
		Madakasíra ...	443	81,457	1·10	3	42	1	.....	...
		Dharmavaram ...	632	70,943	1·08	3	44	1	.....	...
		Total ...	2,178	336,970	5·07	12	215	5		
	2. Anantapur (Anantapur).	Anantapur ...	867	108,731	1·47	3	94	...	Anantapur ...	7,938
		Kalyandrug ...	817	76,977	1·03	3	61	1	.....	...
		Total ...	1,684	185,708	2·50	6	155	1		
	3. Gooty (Gooty).	Gooty	1,054	156,155	2·96	4	135	3	.....	...
		Tadpatri ...	641	109,421	2·15	4	90	2	.....	...
		Total ...	1,695	265,576	5·11	8	225	5		
		Add shrotriyam-jodi and cesses.	...	...	0·16	...	...	...		
		Grand Total ...	5,557	788,254	12·84	26	595	11		

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given here may not be absolutely accurate.

† Divisions in charge of officers of the Indian Civil Service.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Cuddapah (Cuddapah.)	1. Madanapalle † (Madanapalle).	Ráyachóti ...	998	113,912	1·36	4	82	1	.....	...
		Kadiri ...	1,158	145,503	1·63	4	130	1	.....	...
		Vayalpad ...	831	128,692	1·73	4	112	1	.....	...
		Madanapalle ...	837	136,977	1·74	4	88	1	.....	...
		Total ...	3,824	525,084	6·46	16	412	4		
	2. Siddhavattam (Siddhavattam).	Badvel ...	755	89,361	1·17	3	86	2	.....	...
		Siddhavattam ...	606	68,087	1·02	3	72	1	.....	...
		Pullampet ...	979	143,521	2·34	4	86	3	.....	...
		Total ...	2,340	300,969	4·53	10	244	6		
	3. Jammalamadugu (Jammalamadugu).	Jammalamadugu.	616	103,707	2·42	3	109	1	.....	...
		Proddatur ...	478	102,570	2·37	4	67	1	.....	...
		Pulivendla ...	701	103,396	2·08	3	97	2	.....	...
		Total ...	1,795	309,673	6·87	10	273	4		
	4. Cuddapah (Cuddapah).	Cuddapah ...	764	155,541	2·84	5	129	3	Cuddapah ...	16,432
		Total ...	764	155,541	2·84	5	129	3		
		Add shrotriyam-jodi and cesses.	...	...	·46	...	...	...		
		Grand Total ...	8,723	1,291,267	21·16	41	1,058	17		
Nellore (Nellore).	1. Ongole † (Ongole).	Ongole	796	224,172	4·22	4	94	1	Ongole ...	12,864
		Kandukur ...	787	151,417	3·11	3	84	1	.....	...
		Kanigiri ...	1,014	110,813	·61	3	33	1	.....	...
		Darsi (Z) ...	616	82,459	‡ ...	...	...	...	.....	...
		Podili (Z) ...	564	58,937		...	...	...	.....	...
		Total ...	3,777	627,798	7·94	10	211	3		
	2. Gudur (Gudur).	Gudur	910	144,209	3·75	5	61	2	.....	...
		Rapur	596	70,130	1·33	3	52	...	.....	...
		Venkatagiri (Z).	426	60,861	3·69	...	...	1	.....	...
		Polur (Z) ...	355	74,512		...	18	2	.....	...
		Total ...	2,287	349,712	8·77	8	131	5		
	3. Atmakur (Atmakur).	Atmakur ...	640	110,906	2·74	3	74	1	.....	...
		Udayagiri ...	871	95,173	·63	3	34	2	.....	...
		Total ...	1,511	206,079	3·37	6	108	3		
	4. Nellore (Nellore).	Nellore	638	226,383	8·09	5	105	3	Nellore ...	32,040
		Kávali	548	87,015	2·08	3	36	1	.....	...
		Total ...	1,186	313,398	10·17	8	141	4		
		Add revenue paid into the treasury for which details for each taluk are not available, &c.	...	...	Miscellaneous revenue. ·03 Shrotriyam jodi and cesses. ·92 Peshkash and cesses. 1·57	...	...	...		
		Grand Total ...	8,761	1,496,987	32·77	32	591	15		

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† Divisions in charge of officers of the Indian Civil Service.

‡ Shown under Venkatagiri.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Chingleput (Saidapet). (District Judge's head-quarters, Chingleput.)	1. Chingleput† (Chingleput).	Madurántakam.	696	278,561	4·25	4	351	4	.....	...
		Conjeeveram ...	514	225,300	3·57	4	292	2	Conjeeveram ...	46,164
		Chingleput ...	436	155,213	2·16	3	235	2	Chingleput ...	10,551
		Total ...	1,646	659,074	9·98	11	878	8		
	2. Tiruvallúr (Tiruvallúr).	Tiruvallúr ...	508	253,973	2·92	4	224	2	.....	...
		Kálahasti (Z) ...	236							
		Ponnéri ...	347	136,597	2·06	3	155	1	.....	...
		Total ...	1,091	390,570	4·98	7	379	3		
	3. Saidapet (Saidapet).	Saidapet ...	342	262,478	2·20	4	208	7	.....	...
		Total ...	342	262,478	2·20	4	208	7		
		Add shrotriyam-jodi and cesses.	...	...	·88	...	...	...		
		Permanently-settled revenue and cesses.	...	...	1·82	...	...	...		
		Grand Total ...	3,079	1,312,122	19·86	22	1,465	18		
Madras (Madras).	.....	... ..	27	509,346	1·6	3	...	...	Madras ...	509,346
		Total ...	27	509,346	1·6	3	...	...		
South Arcot (Cuddalore).	1. Tindivanam† (Tindivanam)	Tindivanam ...	816	338,973	6·90	7	461	1	.....	...
		Tiruvannámalai.	1,009	244,085	3·55	4	393	...	Tiruvannámalai.	17,069
		Villupuram ...	509	313,607	6·23	5	293	2	.....	...
		Total ...	2,334	896,665	16·68	16	1,147	3		
	2. Chidambaram (Cuddalore as a temporary measure).	Chidambaram ...	402	294,868	9·13	5	333	5	Chidambaram.	19,909
		Vriddhachalam.	576	242,140	5·47	5	294	3	.....	...
		Total ...	978	537,008	14·60	10	627	8		
	3. Tirukkóyilúr (Tirukkóyilúr).	Tirukkóyilúr ...	584	285,068	5·34	5	333	3	.....	...
		Kallakurchi ...	873	269,377	4·29	5	270	4	.....	...
		Total ...	1,457	554,445	9·63	10	603	7		
	4. Cuddalore (Cuddalore).	Cuddalore ...	448	361,776	4·94	5	212	3	Cuddalore ...	52,216
		Total ...	448	361,776	4·94	5	212	3		
		Add shrotriyam-jodi and cesses.	...	...	·27	...	...	...		
		Permanently-settled revenue and cesses.	...	...	·11	...	...	...		
		Grand Total ...	5,217	2,349,894	46·23	41	2,589	21		

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† Divisions in charge of officers of the Indian Civil Service.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
North Arcot (Chittoor).	1. Vellore † (Vellore).	Arcot	432	180,564	3·72	5	253	1	.....	...
		Vellore	421	200,541	2·14	3	149	2	Vellore ...	43,537
		Gudiyáttam ...	447	195,665	2·82	4	183	1	Gudiyáttam ...	21,335
		Kangundi (Z) ...	347	64,446	·22	...	...	1	.....	...
		Total ...	1,647	641,216	8·90	12	585	5		
	2. Ránipéttai † (Ránipéttai).	Walajapet ...	484	221,812	3·28	5	231	4	Walajapet ...	10,067
		Chandragiri ...	548	113,550	·79	3	54	2	Tirupati ...	15,485
		Karvetnagar (Z).	943	341,240	1·74	...	...	3	.....	...
		Kálahasti (Z) ...	638	94,132	1·73	...	...	1	.....	...
		Total ...	2,613	770,734	7·54	8	285	10		
	3. Arni (Arni).	Wandiwash ...	466	185,252	4·03	6	281	1	.....	...
		Polur	596	155,673	2·53	4	159	1	.....	...
		Arni Jagir (Z) ...	184	96,542	·05	...	...	1	.....	...
		Total ...	1,246	437,467	6·61	10	440	3		
	4. Chittoor (Chittoor).	Chittoor ...	793	209,868	2·09	5	141	1	.....	...
		Palmanér ...	439	51,575	·79	3	70	1	.....	...
		Punganúru (Z)...	648	96,852	·67	...	...	1	.....	...
		Total ...	1,880	358,295	3·55	8	211	3		
		Add shrotriyam-jodi and cesses.	...	...	·32	...	...	...		
		Permanently-settled revenue and cesses.	...	...	·19	...	...	...		
		Other items for which details for each taluk are not available.	...	...	·14	...	...	...		
		Grand Total ...	7,386	2,207,712	27·25	38	1,521	21		
Salem (Salem).	1. Hosúr † (Hosúr).	Hosúr	1,217	184,971	1·95	4	506	2	.....	...
		Dharmapuri ...	941	206,030	2·03	4	546	4	.....	...
		Krishnagiri ...	659	175,300	1·73	3	312	3	.....	...
		Total ...	2,817	566,301	5·71	11	1,364	9		
	2. Tiruppattúr † (Tiruppattúr).	Tiruppattúr ...	539	205,986	1·39	3	183	...	Tiruppatur ...	18,689
		Úttangarai ...	910	159,419	1·54	4	437	1	Vaniyambadi.	12,005
		Total ...	1,449	365,405	2·93	7	620	1	.....	...
	3. Salem (Salem).	Salem	1,071	470,181	4·85	5	418	5	Salem	70,621
		Atur	841	199,475	2·61	4	170	8	.....	...
		Total ...	1,912	669,656	7·46	9	588	13		
	4. Námakkal (Námakkal).	Námakkal ...	715	313,895	2·43	4	105	9	.....	...
		Tiruchengódu ...	637	289,717	3·32	4	103	2	.....	...
		Total ...	1,352	603,612	5·75	8	208	11		
		Add shrotriyam-jodi and cesses.	...	...	·55	...	...	...		
		Permanently-settled revenue and cesses.	...	...	4·96	...	...	...		
		Grand Total ...	7,530	2,204,974	27·36	35	2,780	34		

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† Divisions in charge of officers of the Indian Civil Service.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Coimbatore (Coimbatore).	1. Pollachi † (Pollachi).	Udamalpet ...	566	150,480	2·38	3	84	1	.....	...
		Palladam ...	741	300,904	4·81	4	195	3	.....	...
		Pollachi ...	710	195,608	2·74	3	129	4	.....	...
		Total ...	2,017	646,992	9·93	10	408	8		
	2. Erode (Erode).	Karúr	612	220,843	3·32	3	85	1	Karúr	12,769
		Dhárápuram ...	853	271,127	4·44	4	84	1	.....	...
		Bhavání ...	715	145,982	1·42	3	66	1	.....	...
		Erode	598	275,460	5·00	5	210	...	Erode	15,529
		Total ...	2,778	913,412	14·18	15	445	3		
	3. Coimbatore (Coimbatore).	Coimbatore ...	804	330,684	4·14	5	261	5	Coimbatore ...	53,080
		Satyamangalam.	1,185	214,101	4·24	5	226	4	.....	...
		Total ...	1,989	544,785	8·38	10	487	9		
	4. Kollegal (Kollegal).	Kollegal ...	1,076	96,563	1·08	3	144	1	.....	...
		Total ...	1,076	96,563	1·08	3	144	1		
		Add shrotriyam-jodi and cesses.	...	...	·06	...	...	...		
		Permanently-settled revenue and cesses.	...	...	·33	...	...	...		
		Grand Total ...	7,860	2,201,752	33·96	38	1,484	21		
Trichinopoly (Trichinopoly).	1. Musiri (Musiri).	Musiri	762	294,383	4·59	5	117	3	.....	...
		Kulittalai ...	901	263,331	3·16	4	81	1	.....	...
		Total ...	1,663	557,714	7·75	9	198	4		
	2. Ariyalúr (Ariyalúr).	Perambalúr ...	674	204,257	3·70	4	103	3	.....	...
		Udayárpálaiyam.	753	300,708	3·68	6	116	3	.....	...
		Total ...	1,427	504,965	7·38	10	219	6		
	3. Trichinopoly (Trichinopoly).	Trichinopoly ...	542	382,091	7·96	5	157	3	Trichinopoly ...	104,721
									Srírangam ...	23,039
		Total ...	542	382,091	7·96	5	157	3		
		Add shrotriyam-jodi and cesses.	...	...	·18	...	...	...		
		Permanently-settled revenue and cesses.	...	...	·73	...	...	...		
		Other items for which details for each taluk are not available.	...	...	·03	...	...	...		
		Grand Total ...	3,632	1,444,770	24·03	24	574	13		
Tanjore (Tanjore).	1. Negapatam † (Negapatam).	Nannilam ...	293	214,788	11·36	4	225	2	.....	...
		Negapatam ...	240	217,607	5·72	3	136	1	Negapatam ...	57,190
		Total ...	533	432,395	17·08	7	361	3		

* As a large part of the Presidency has not been surveyed cadastrally, some of the areas given here may not be absolutely accurate.

† Divisions in charge of officers of the Indian Civil Service.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Tanjore (Tanjore)—*cont.*	2. Kumbakónam † (Kumbakónam).	Kumbakónam ...	342	375,031	13·00	5	226	4	Kumbakónam...	59,673
		Total ...	342	375,031	13·00	5	226	4		
	3. Máyavaram (Máyavaram).	Máyavaram ...	283	247,019	8·91	3	175	1	Máyavaram ...	24,276
		Shiyali	171	116,563	4·04	3	81	1	.....	...
		Total ...	454	363,582	12·95	6	256	2		
	4. Mánnargudi (Mánnargudi).	Mánnargudi ...	301	188,107	6·16	4	137	1	Mánnargudi ...	20,449
		Tirutturaippándi.	485	182,981	5·06	5	130	3	.....	...
		Total ...	786	371,088	11·22	9	267	4		
	5. Tanjore (Tanjore).	Tanjore	689	407,039	9·87	6	212	4	Tanjore ...	57,870
		Total ...	689	407,039	9·87	6	212	4		
	6. Pattukkóttai (Tanjore).	Pattukkóttai ...	906	295,894	1·67	4	99	2	.....	...
		Total ...	906	295,894	1·67	4	99	2		
		Add shrotriyam-jodi and cesses.	...	...	1·86	...	...	...		
		Permanently-settled revenue and cesses.	...	...	·42	...	...	...		
		Grand Total ...	3,710	2,245,029	68·07	37	1,421	19		
Madura (Madura).	1. Dindigul † (Dindigul).	Dindigul ...	1,122	430,524	4·09	6	169	4	Dindigul ...	25,182
		Palni	599	214,972	2·30	3	69	3	Palni	17,168
		Kodaikanal ...		19,677	·40	2	16	...	Kodaikanal ...	1,912
		Periyakulam ...	1,520	320,098	3·25	4	46	6	Periyakulam ...	17,960
		Total ...	3,241	985,271	10·04	15	309	13		
	2. Ramnad † (Ramnad).	Ramnad (Z) ...	2,104	723,886	2·95	...	4	11	.....	...
		Sivaganga (Z) ...	1,680	394,206	2·88	...	...	7	.....	...
		Total ...	3,784	1,118,092	5·83	...	4	18		
	3 Madura (Madura).	Madura	446	308,140	6·23	6	180	1	Madura ...	105,984
		Tirumangalam ...	745	265,396	3·92	5	159	3	.....	...
		Total ...	1,191	573,536	10·15	11	339	4		
	4. Melur (Madura).	Melur	485	154,381	4·32	4	91	2	.....	...
		Total ...	485	154,381	4·32	4	91	2		
		Add shrotriyam-jodi and cesses.	...	...	1·27	..	...	...		
		Permanently-settled revenue and cesses.	...	...	2·92	...	...	...		
		Other items for which details for each taluk are not available.	...	..	·30	...	...	...		
		Grand Total ...	8,701	2,831,280	34·82	30	734	36		

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† Divisions in charge of officers of the Indian Civil Service.

(Z) denotes Zamindari divisions.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Ryotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Tinnevelly (Tinnevelly). (District Judge's head-quarters, Palamcottah.)	1. Tuticorin † (Tuticorin).	Ottappidáram ...	1,072	358,568	1·87	3	80	2	Tuticorin ...	28,048
		Srívaikuntam ...	542	321,534	6·55	6	125	6	.....	...
		Total ...	1,614	680,102	8·42	9	205	8		
	2. Sérmádévi † (Sérmádévi).	Nángunéri ...	730	202,528	4·22	5	211	4	.....	...
		Tenkási ...	374	174,430	2·19	3	37	3	.....	...
		Ambásamudram.	481	182,481	4·40	3	81	7	.....	...
		Total ...	1,585	559,439	10·81	11	329	14		
	3. Sáttúr † (Sáttúr).	Sáttúr	560	186,694	2·11	4	79	4	.....	...
		Srívilliputtúr ...	585	205,745	3·99	5	91	3	Srívilliputtúr ...	26,382
		Total ...	1,145	392,439	6·10	9	170	7		
	4. Tinnevelly (Tinnevelly).	Tinnevelly ..	328	194,647	3·81	4	104	1	Tinnevelly ...	40,469
		Sankaranayinárkóyil.	717	232,980	2·05	3	56	5	Palamcottah ...	39,545
									.....	...
		Total ...	1,045	427,627	5·86	7	160	6		
		Add shrotriyamjodi and cesses.	...	...	·69	...	...	...		
		Permanently-settled revenue and cesses.	...	...	3·56	...	...	...		
		Other items for which details for each taluk are not available.	...	...	·22	...	...	...		
		Grand Total ...	5,389	2,059,607	35·66	36	864	35		
Malabar (Calicut).	1. Tellicherry † (Tellicherry).	Chirakkal ...	644	320,107	2·58	4	44	...	Cannanore ..	27,811
		Kóttayam ...	462	209,516	1·45	3	28	...	Tellicherry ...	27,883
		Kurumbranát ...	538	327,310	2·82	3	57	...	.. ...	...
		Total ...	1,644	856,933	6·85	10	129	...		
	2. Palghat † (Palghat).	Palghat	613	390,098	4·37	5	57	...	Palghat ...	44,177
		Ponnáni	427	478,376	4·03	5	73	...	.....	...
		Total ...	1,040	868,474	8·40	10	130	...		
	3. Malappuram † (Malappuram).	Ernad	823	357,142	2·66	4	54	...	.....	...
		Walavanad ...	951	351,112	3·08	4	63	...	.....	...
		Total ...	1,774	708,254	5·74	8	117	...		
	4. Manantoddy (Manantoddy).	Wynaad ...	820	75,149	1·64	3	23	...	.....	...
		Total ...	820	75,149	1·64	3	23	...		
	5. Calicut (Calicut).	Calicut	339	255,612	1·89	3	39	...	Calicut ...	76,981
		Total ...	339	255,612	1·89	3	39	...		

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† Divisions in charge of Officers of the Indian Civil Service.

APPENDIX II—*continued.*

District and head-quarters.	Division and head-quarters.	Taluks and zamindari divisions.	Area in square miles.*	Population (1901).	Current demand of land revenue and cesses (Fasli 1310).	Number of			Municipalities.	
						Revenue inspector's charges.	Pyotwari and inam villages.	Unions.	Name.	Population (1901).
1	2	3	4	5	6	7	8	9	10	11
					LAKHS.					
Malabar (Calicut) —*cont.*	6. Cochin (Cochin).	Cochin	2	25,859	·21	...	4	...	Cochin ...	19,274
		Total ...	2	25,859	·21	...	4	...		
		Add permanently settled revenue and cesses.	...	...	·04	...	...	...		
		Other items for which details for each taluk are not available.	...	...	·31	...	...	...		
		Grand Total ...	5,619	2,790,281	25·08	34	442	...		
South Canara (Mangalore).	1. Coondapoor† (Coondapoor).	Udipi	722	251,831	3·77	3	241	...	.....	...
		Coondapoor ...	619	131,858	2·82	3	209	...	.....	...
		Total ...	1,341	383,689	6·59	6	450	...		
	2. Mangalore (Mangalore).	Mangalore ...	666	334,294	4·65	4	331	...	Mangalore ...	44,108
		Amindivi Islands.	3	3,608	...	...	5	...	.....	...
		Total ...	669	337,902	4·65	4	336	...		
	3. Puttúr (Puttúr).	Kasaragod ...	774	231,280	1·99	3	174	...	.....	...
		Uppinangadi ...	1,241	181,842	2·30	3	325	...	.....	..
		Total ...	2,015	413,122	4·29	6	499	...		
		Grand Total ...	4,025	1,134,713	15·53	16	1,285	...		
The Nilgiris (Ootacamund).	1. Ootacamund † (in charge of the Collector, Ootacamund).	Ootacamund ...	487	37,998	1·56 including Gudalur.	2	18	...	Ootacamund ...	18,596
		Coonoor ...	230	52,300		2	21	...	Coonoor ...	8,525
		Total ...	717	90,298	...	4	39	...		
	2. Ootacamund † (Ootacamund).	Gudalur ...	240	21,139	...	1	11	...	.....	...
		Total ...	240	21,139	...	1	11	...		
		Grand Total ...	957	111,437	1·56	5	50	...		

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† Divisions in charge of Officers of the Indian Civil Service.

DETAILS OF THE LAST CENSUS—TRIBES AND LANGUAGE.

Classification of castes and tribes.

231. At the three censuses of 1871, 1881 and 1891 the classification of the castes, tribes and races of the Presidency was made upon the basis of the traditional occupations and callings which they were supposed to follow. In 1891, for example, they were arranged under the five main classes (*a*) Agriculture, (*b*) Professional, (*c*) Commercial, (*d*) Artisans and village menials and (*e*) Vagrants, etc., and these classes were again split up into some 56 more detailed groups, the agricultural castes, for instance, being subdivided into cultivators, cattle-breeders, field-labourers and so forth. From an economic point of view the results obtained were less useful than the occupation statistics proper, as it is difficult to classify by occupation the many castes which follow more than one calling, and from an ethnological aspect they were disappointing, as the same occupational group sometimes contained castes which were Hindu, Musalman, Jain and Buddhist by religion, spoke several different languages, and came from such different localities as the agencies of the three northern districts and the plains of the west coast.

232. In 1901 the classification was based upon the religions which the various castes professed, and the Hindu and Animist castes were further arranged according to the languages which they spoke. The general results were as under—

Hindu and Animist castes—			NO.	TOTAL.
A.—Castes which speak Tamil			14,605,330	
B.— Do.	do.	Telugu	14,523,159	
C.— Do.	do.	Malayálam	1,847,670	
D.— Do.	do.	Canarese	1,717,450	
E.— Do.	do.	Oriyá	1,233,785	
F.— Do.	do.	other languages. (i) Languages of the Madras Presidency.	1,137,123	
		other languages. (ii) Languages foreign to the Presidency and not stated.	13,894	
				35,078,411
Musalman tribes				2,477,610
Christians				1,038,854
Castes, races, etc., of the Jains, Buddhists, Parsis, Jews and those of other religions				28,191
			Total	38,623,066

233. This classification is not entirely accurate as some few cases occur in which a Hindu or Animist caste speaks more than one language. The Uppiliyans, for example, speak Tamil, Telugu and Canarese; the Kóyis speak Telugu and Kóyá; the Kálingis Telugu and Oriyá; and some of the castes of South Canara speak both Canarese and Tulu. These have been placed under the language which appears to be most generally used by them. Nor is the arrangement altogether scientific. A really scientific classification requires full materials from the fields of early vernacular literature, history, folklore, customs, archæology, epigraphy and anthropometry, and none of these have yet been thoroughly explored. No better method of arrangement, however, suggested itself. A territorial classification would not have been successful, as every district contains castes, tribes and races of different religions, languages and extractions, and though an ethnological or anthropometrical classification might have separated more scientifically than the system adopted by the Aryans from the Dravidians, and the Kolarians from either, the information regarding race characteristics and cranial measurements (such as nasal indices) at present available would not have permitted the drawing of any clear distinctions between the numerous semi-Dravidian castes which form the bulk of the population. The arrangement, however, coincides with accepted usage, as Musalman tribes, for example, are never connected by the people themselves with Hindu castes, even though they may carry on similar occupations, nor are the Oriyá-speaking castes, for instance, treated by them as being allied to the Malayálam and Canarese-speaking people.

234. In addition to this classification by religion and language the Hindu and Animist castes were further grouped according to their social precedence as gauged by their adherence to the Bráhmanical systems of worship and the estimation in which they appeared to be held by such Hindu public opinion as can be said to exist upon the subject. The general results were as under—

Social Precedence Groups.	Persons.	Percentage of Group on total population of Hindus and Animists.
I. Bráhman and allied castes	1,204,766	3·4
II. Kshatriya and allied castes	309,304	0·9
III. Vaisya and allied castes	494,673	1·4
IV. Sat-Súdras or Good Súdras	10,876,909	31·0
V. Súdras who habitually employ Bráhmans as puróhits and whose touch pollutes to a slight degree	5,677,626	16·2
VI. Súdras who occasionally employ Bráhmans as puróhits and whose touch pollutes	3,919,360	11·2
VII. Súdras who do not employ Bráhmans as puróhits and whose touch pollutes.	1,976,912	5·7
VIII. Castes which pollute even without touching but do not eat beef	2,893,908	8·3
IX. Castes which eat beef but do not pollute except by touch	1,254,676	3·5
X. Castes which eat beef and pollute even without touching	5,201,048	14·8
XI. Castes which deny the sacerdotal authority of the Bráhmans	1,112,624	3·2
XII. Cases in which caste was insufficiently indicated	142,711	0·4
XIII. Castes foreign to the Presidency	11,518	...
XIV. Caste not stated	2,376	...
Total ...	35,078,411	100·0

Caste an indefinite expression.

235. The statistical tables distinguished some 450 main Hindu and Animist castes, but the decision as to what should or should not be considered to be a "main caste" had often to be made in a somewhat arbitrary manner owing to the shadowy nature of the distinctions which differentiate one caste from another in this Presidency. Intermarriage and inter-dining are no criteria in determining what is and what is not a caste. Among the Bráhmans, for example, such matters are often determined by differences of sect. A Vaishnava Bráhman will not marry or dine with a Saivite Bráhman, but no one regards the two sects as separate castes in consequence. In any large caste such as the Bráhmans or the Vellálas the limits within the caste itself within which a man may marry with the approbation of his relations or dine without incurring their scorn differ, probably, in every district, and almost in every taluk, and depend upon such matters as the territorial or other sub-divisions, the religious observances in the matter of food, etc., and the sect, occupation, wealth and social estimation of the parties concerned. These mutually exclusive sections are already numberless and are changing every day (for a man who has got up in the world will often hold himself aloof from those of his caste whom he formerly treated as equals) and they thus form a most perplexing and unstable foundation for any scientific scheme of classification. These minute sub-divisions are not, moreover, recognised or understood outside the caste itself and it would be contrary to native usage to treat them as castes.

236. In the ordinary meaning of the word now-a-days a caste is rather a general than a specific term, and may comprise a number of sections, which, though they perhaps had originally a common tie,—often indicated in the name common to them all,—in their ethnic descent, their birth-place, their language or their occupation, are now drifting farther and farther apart in all every-day social and religious matters, and may not intermarry and do not usually dine together.

Diversity of caste customs.

237. Of the Hindu castes the thirteen following number more than 1·5 per cent. of the total Hindu population of the Presidency:—Kápu 2,576,448, Palli 2,554,316, Vellála 2,378,739, Paraiyan 2,152,840, Mála 1,405,027, Balija 1,008,036, Kamma 973,723, Golla 855,221, Pallan 825,395, Mádiga 755,316, Idaiyan 694,829, Shánán 603,189, and Tíyan 578,451. These and many others have been described by various observers of their ways and manners, but much more remains to be done before it can be asserted that the last word has been said regarding any of them, for it is difficult to ensure that any observations shall be entirely applicable to every branch of a caste, in whatever district and amid whatever surroundings it may reside. Customs and ways sometimes change in a marked manner from taluk to taluk even in the case of the smaller castes, and when a community which numbers hundreds of thousands and is found in half-a-dozen districts comes to be dealt with the probabilities

that too universal an application may be inadvertently assigned to a characteristic which is in reality local in its occurrence are immensely increased. If there is one caste in the Presidency the customs obtaining among some of the members of which might be supposed to prevail among them all it is the Náyádis. The caste only numbers some 600 souls, it is found only in one district (Malabar) and its range of pollution is so great (a Náyádi will pollute a Bráhman at a distance of a hundred yards) that it is cut off from all intercourse with other castes and so from most of the external influences which might modify its customs. And yet these customs differ in different taluks of the district.

238. The ethnographic survey of the Presidency which is now in progress has thus before it a field which has long called for scientific exploration, and a thorough examination of which will result in great practical benefit as well as in discoveries of academic interest. For a man's caste affects his life from its beginning to its end. It frequently determines his occupation, and it often fixes his residence for him, most villages being divided into caste quarters. His social position, and with it his friends and the limits within which he may marry, are equally decided by his caste, and so are his food, his drink, his name, and even sometimes the clothes which he and his womenkind may wear.

239. It is the fashion to assume that these personal and intimate effects of the caste system are daily weakening under a Government which professes to make no distinctions of caste or creed, and the fact that a Bráhman will travel in the same railway carriage with a Paraiyan is instanced as a sign of the way the old order changeth. But the real depth to which modern solvents of the system have penetrated is probably often over-estimated. It is true that the various castes cling less tenaciously than they did to their traditional occupations, and that the boundaries between the large Súdra castes are less clearly marked than they were, but on the other hand the tendency to confine intermarriage to the narrowest circle within the caste and sub-caste was perhaps never stronger, and it is still increasing in strength. It is these small endogamous sub-divisions which are for all social purposes the real castes; and the Dravidian custom, known as *ménarikam*, which requires a man to marry, if possible, his maternal uncle's daughter, assists to restrict them within the closest limits.

240. No doubt in towns and on journeys caste prejudices and rules have to be relaxed, but once back in his own village the traveller is as particular as ever. There is an old proverb which says *pattanam pátham ácháram*, "in towns a quarter of the ordinary caste observances suffice," and in a railway-carriage the fraction is perforce doubtless even smaller. But the departure from orthodoxy is only temporary.

241. How strongly even the lower ranks of society still feel upon points of caste etiquette is sufficiently shown by the fact that the claim of the Shánáns to a measure of equality in the temples with those above them in social precedence was recently sufficient to set a whole district by the ears.

Points peculiar to this Presidency.

242. The essential difference between the castes of this Presidency and those of Upper India is that the ideas of the Áryans and the rules of Manu have affected our people less deeply than those north of the Vindhyas. The body of the population here is Dravidian, and the system of Manu, with its division of all classes into the four sharply defined castes of the Bráhmans, Kshatriyas, Vaisyas and Súdras, was never in existence in this Presidency except in theory. It is true that the classification by social precedence given above includes groups of Kshatriyas and Vaisyas but these are, it will be seen, the smallest in the table, and the castes placed in them are either foreigners or are communities which have been so classified less because they are Kshatriyas or Vaisyas in the strict sense of the words as Manu used them than because the people generally have loosely accorded them a position generally corresponding to that which was theoretically held by those two castes.

The changes which are occurring in the caste system.

243. What, however, was the origin of the numerous castes which are found in existence to-day is a matter on which much learned speculation has been exercised and regarding which it is not safe to dogmatise. Ethnic descent, geographical isolation, language, occupation, environment, material prosperity or the reverse are all factors which have entered into the constitution of the existing state of things. For the present purpose it is more important to note that the abiding characteristic of the social system of to-day is the instability of its component parts. The next thirty years will probably see a considerable change in the proportions of the people who come within the several social precedence groups already referred to. Generally speaking, the more a caste employs Bráhmans to superintend its religious

ceremonies, and the nearer it approaches to the Bráhman customs in its social and religious observances, the higher it is held in social esteem. But from day to day constant changes are going on in the customs of the sub-divisions of each caste, and these affect the social position held by them, and often, in consequence, by the caste to which they belong.

244. In many castes, for example, sub-divisions may be found which are taking to the Bráhmanical customs of infant marriage, vegetarianism, and so on, while the main body of the caste adheres to its original observances. Thus the Kallars of Tanjore shave their heads and call in Bráhmans at their ceremonies, while their brethren across the border in Madura continue to merely tie their hair in a knot and employ their own folk to officiate as their priests. This advance of one section will doubtless in time enhance the social estimation of the caste as a whole.

245. Sometimes these changes are sufficiently persistent to result in the gradual evolution of entirely new castes. The Játápus afford an example. They were originally Khonds, but they have now given up eating beef, and taken to infant marriage and the worship of the Hindu gods, and are practically a distinct caste.

246. Instances occur in which the main body of a caste is aspiring to a social position higher than that which Hindu society in general is inclined to accord it. The Kammálas and Kamsalas and the Patnúlkárans desire to be classed as Bráhmans; the Pallis or Vanniyas, the Shánáns and some of the Balijas claim to be Kshatriyas; and the Kómatis, the Múttans and some few Vellálas state that they are Vaisyas. The Panikkans of Tinnevelly wish to be treated as Vellálas.

247. A sub-division or a caste which is trying to get up in the world by changing its ways frequently, however, clings still to some old custom or other which allows its Dravidian origin to appear. The Játápus, for instance, still worship the goddess Jákara, who is not one of the Hindu pantheon, and though they eschew widow-marriage still permit divorces; and the Véttuvans, who esteem themselves superior to Védars, call themselves Vellálas, and are some of them taking to vegetarianism, still worship aboriginal goddesses, and though they discountenance widow-marriage do not perform sráddhas. The Ambalakárans afford another example of the kind.

248. The existence of totemism sometimes serves to prove a Dravidian origin even when almost all other signs of it have been lost. The case of the Kómatis is an illustration of this.

249. The evolution of entirely new castes is not, however, caused only by the adoption of the customs of superior castes. It is sometimes due to the occurrence of a change in the occupation of some section of a caste. Instances of this are the Kóliyans and Valluvans, who were originally the weavers and the priests among the Paraiyans but now will not intermarry with others of that caste, and, though they are sometimes still classed as sub-divisions of the Paraiyans, are generally regarded as new and distinct castes. Sometimes a common occupation is sufficient to combine members of entirely different castes into a body which in time becomes a caste by itself. An example of this is afforded by the Parivárams, who are even now recruited from other bodies, but whose community of occupation as servants to the southern zamindars has bound them together into a distinct caste. Sometimes migration to a new country will cause a section of a caste to gradually so differ from the parent stock that it becomes a new caste. The Pattapus were probably within recent times a branch of the Pattanavans, and they were so classed at the 1871 census, but they are now a caste by themselves.

250. The changes which are thus constantly occurring in the constitution of the caste-system have naturally resulted in many sub-divisions, and even many whole castes, deserting their traditional occupations for other callings. How very general is the tendency in this direction is sufficiently shown by the statistics of occupation by caste which were collected at the 1901 census.

251. Altogether, therefore, the present condition of the caste-system is totally and entirely different from the picture of its original state which Manu and the Puránas and the other ancient books present to us. In those times, instead of hundreds of castes, there were just the four communities of the Bráhmans, Kshatriyas, Vaisyas and Súdras. Each of these kept rigorously to its traditional occupations instead of following, as at present, any calling which promises to be

profitable. They did not confine their marriages within the narrow limits which are now the rule, but, except that (apparently, the authorities differ) a Bráhman man might not marry a Súdra woman, the men of any of the four castes might not marry with any of he women of any of the castes below them.

Musalman tribes.

252. So far only the Hindu and Animist castes of the Presidency have been referred to, and it remains to say a few words about the tribes and races belonging to the Musalman and Jain religions.

253. Musalmans in this Presidency constitute only some 6 per cent. of the population. They are of three descriptions: (*a*) those who are immigrants from other provinces and countries, or pure-blooded descendants of such immigrants; (*b*) those who are the offspring of immigrant men by Hindu women of this country; and (*c*) those who are full-blooded natives of the Presidency who have been converted to Islam. What proportion each class bears to the others it is not possible, however, to accurately determine, for, though no foreign Musalman ever calls himself by the tribal names restricted to the mixed races and the converts (such as Dúdékula, Jónagan, Labbai, Máppilla, Marakkáyar, etc.) many of these latter arrogate to themselves names, such as Saiyad and Sheik, which in strictness only apply to pure-bred Musalmans. In many respects their social and religious customs have been influenced by those of the Hindus round them. At some of their ceremonies cloths are distributed to the needy in the Hindu manner and sandal paste is used. The marriage ritual, instead of keeping to the simple form prescribed by the Korán, has been greatly elaborated and even includes processions. A necklet of black beads, which is formally put on like the Hindu táli, has also come into use, and the women wear bracelets which are broken when they become widows. Hindus take a leading part in the celebration of the Mohurram in Madras City. Passages of the Korán are sometimes chanted as mantrams in the Hindu fashion. Though the Korán discourages astrology, lower class Musalmans will consult panchángam Bráhmans about the chances of the success of their enterprises. Some of these Bráhmans will send half the fee so obtained to the Musalman mosque at Nágúr, near Negapatam, and will even offer sugar and flowers at that shrine, though they endeavour to excuse the act by saying that the saint to whom it is consecrated was originally a Bráhman. Musalman women of the lower classes will break cocoanuts at Hindu temples in fulfilment of vows.

Jains.

254. The Jains of Madras are an entirely distinct community, never intermarrying with other religionists or eating with them. In this respect they differ from the Bombay Jains, who will eat with Hindus. They also differ from the Bombay Jains in wearing the thread. Most of them are cultivators or traders, and they are chiefly found in North and South Arcot and in South Canara. They do not eat flesh or fish, or smoke, and they do not permit widow-marriage, which is apparently allowed by all other Jains. In this Presidency they seem clearly to have no castes, properly so called.

Christians.

255. Native Christians have increased in the last ten years from 825,424 to 983,888, or by no less than 19 per cent.

256. Europeans number 13,932 against 13,417 in 1891. The smallness of the increase is due to the reduction in several of the garrisons of European troops. Males are naturally more numerous than females, the totals being respectively 8,697 and 5,235, but among children below fifteen years of age the reverse is the case. Of the total number of Europeans, 12,541 are British subjects and 1,391 are of other nationalities. Of the latter 378 are French, 352 German and 237 American. Most of these are missionaries.

257. Eurasians have decreased from 26,633 to 26,185. Between 1881 and 1891 they were alleged to have increased at the abnormal rate of nearly 21 per cent. It seemed clear that this rise could not be real, but must be owing to Native Christians who had taken to European ways and dress having returned themselves as Eurasians with the idea of enhancing their social position. Special measures were accordingly taken to avoid this source of error and the result is a decrease of Eurasians in ten out of the 22 districts. In Madras and Chingleput together, there are 635 less than there were in 1891 and in Malabar 328 less. In the Presidency as a whole there are 19 per cent. more than there were 20 years ago. In spite of these precautions, however, cases appeared in the schedules in which persons with native names and following such unlikely occupations as field labour returned themselves as Eurasians, and it is perhaps not possible to form any decided opinion

as to the real rate of increase of the community, interesting as the question is both scientifically and politically.

258. The table in the margin shows the chief languages of the Presidency and the number of persons who speak each of them. The most noticeable point about these figures is the high proportion which the population speaking the Dravidian tongues bears to the total population of the Presidency. Nowhere else in India are these languages so prominent. The point is clearly brought out by the second set of figures in the margin, which compare the percentages of the people of Madras who speak languages belonging to each of the main families with the corresponding figures for all India in 1891. **The chief languages of the people.**

Language.	Persons.	Proportion per 10,000 of population.
Badaga	34,229	9
Canarese	1,530,688	396
Gadaba	36,406	9
Gujarátí	6,492	2
Hindóstání	889,124	230
Khond or Kandhí	357,053	92
Konda	15,313	4
Konkaní	157,154	41
Korava or Yerukala ...	40,606	11
Kóyá or Kói	46,803	12
Lambádí or Labhání ...	34,452	9
Malayálam	2,854,145	739
Maráthí	119,040	31
Oriyá	1,809,336	468
Patnúlí or Khatrí ...	85,574	22
Porojá or Párjá	26,129	7
Savara	157,100	41
Tamil	15,543,383	4,024
Telugu	14,315,304	3,706
Tulu	495,717	128

Family.	Madras.	All India 1891.
Dravidian	91·26	20·21
Aryan	8·13	75·26
Munda	0·50	1·43
Others	0·11	3·40

259. Of the Áryan languages spoken in the Presidency the following (in order of frequency of occurrence) are the most important: Oriyá (with its dialect Porojá), Hindóstáni, Maráthí (with its dialect Konkaní), Gujarátí (with its dialect Patnúlí), and the gipsy language Lambádí. Except Oriyá and Konkaní all of these are the vernaculars of foreigners who have entered the Presidency either as invaders or traders, and none of them have been able to make any head-way against the Dravidian languages of the country or to spread themselves beyond the limits of the tribes and castes which brought them.

260. The only Munda languages are Gadaba and Savara, which are spoken by some of the inhabitants of the agencies of Ganjám and Vizagapatam.

261. Of the languages in the margin above, only eight—Canarese, Gujarátí, Hindóstání, Malayálam, Maráthí, Oriyá, Tamil and Telugu—have a character and a literature of their own. Of the others, books have been published in Badaga in the Tamil and Canarese characters, in Konkaní in Roman and Canarese letters, in Patnúlí in a modified form of Dévanágari, and in Tulu in Canarese characters. But a million and-a-half persons in the Presidency speak languages which cannot be called written languages. Some of these unwritten languages are in common use for correspondence even though they have no character, Tulu and Konkaní, for example, being written in Canarese letters. It not infrequently happens, on the other hand, that languages with a character of their own are written in the character belonging to some other tongue. Thus Sanskrit and Arabic sacred books are often written in the characters of the Dravidian languages. With the exception of Tulu, the languages without written characters are not taught in the schools. The spoken form of all the main languages varies much from district to district, and when a tongue has a literature of its own the written form frequently differs from the spoken language to such an extent as to be practically unintelligible to the illiterate part of the people.

262. Of the languages which are used by over a million of the population, *Tamil* is spoken in every district in the Presidency, but most in the districts south of Madras (other than those on the west coast) and least in the agencies and South Canara. It is the home speech of 40 per cent. of the population of the Presidency, it is used in the north of Ceylon, and emigrants have carried it to Rangoon and the Straits Settlements. Of the literate population of the Presidency 55 per cent. are literate in this language. It has not, however, spread itself in the northern districts to the same extent that Telugu has invaded the southern. **Their local distribution.**

263. *Telugu* is also spoken in every district. It has been carried into the Tamil country by agricultural castes like the Kammas and Kápus, by soldiers like the Tottiyans, by traders like the Kómatis and Balijas, and by castes which were invited or attracted south to ply their trades there, such as the Chakkiliyans (leather

workers), the Oddes (earth-workers) and the weaving castes of Dévánga, Sále and Janappan. Its real home is in the districts north of Madras, excepting the west of Bellary and Anantapur (where Canarese is spoken), the three agencies and the northern half of Ganjám. It is spoken by some 37 per cent. of the population in the Presidency, but only 24 per cent. of the literate can read and write it.

264. *Malayálam* is the most local in its distribution of all the main Dravidian languages. Of the 2,850,000 persons who speak it, 2,620,000 live in Malabar, its original home, and another 210,000 in South Canara, the adjoining district. Of these latter, 152,000 are found in Kasaragód taluk, which lies next to Malabar, was a part of the ancient Malayálam country, and is even now peopled largely by Malayális. Of the remaining number, one-third are returned from the western taluks of the Nilgiris, which again march with Malabar, but these, as the proportion of the sexes shows, are mainly immigrant labourers on the coffee estates of that district. A glance at a map of the Presidency will show why the language has continued so local in its distribution. The barrier of the Western Ghats shuts off the district from free communication with the east coast and the result has been that its people have developed religious and social customs which are so distinct from those of the rest of the Presidency that they have constituted an obstacle to migration elsewhere. Latterly, however, a considerable tendency towards freer movement has exhibited itself. The number of Malayálam-speaking persons outside the three districts mentioned above is now between two and three times as large as it was ten years ago, and it is safe to prophesy that the next decade will see a further expansion. The Náyars and the Tíyans are the two castes which are most progressive in this respect. At present the men among these emigrants are nearly twice as numerous as the women.

265. *Oriyá* is almost as local in its distribution as Malayálam, hardly occurring anywhere outside Ganjám and Vizagapatam and their agencies.

266. *Canarese* is mainly found in the western taluks of Bellary adjoining Mysore, and the corresponding portion of the Anantapur district, in the Kollegal taluk of Coimbatore and the adjacent areas in Salem and the Nilgiris, and in the northern taluks of South Canara; but it occurs in larger or smaller numbers in every district in the Presidency except Vizagapatam agency.

267. In this Presidency *Hindóstaní* is essentially the language of the Musalmans. Hardly any Madras Hindus speak that tongue in their households. The converse, however, is not the case, for five tribes of Musalmans of mixed descent—the Máppillas, the Labbais, the Jónagans, the Marakkáyars, and the Dúdékulas—speak the Dravidian languages. It might, however, be expected that, deducting these (and also those Musalmans who returned Hindu caste names) from the total Musalman population, we should obtain a figure which would closely approximate to the population whose parent-tongue is Hindóstání. The figure so obtained is 1,075,394. But if we take the number of persons who speak Hindóstání, and even add those speaking Hindí, Arabic and Persian, and yet further assume that all those who speak Mahl, Bengali, Panjábí, Sindhí, Balóchí, Makrání and Pashtó are also Musalmans and include them too, we get a total of only 894,104 persons who speak all the languages which can by any means be considered to be the languages of the Musalmans. The difference between these two figures is 181,290 and, in addition to the tribes of mixed descent above referred to, this number of Madras Musalmans must speak the local languages, and therefore, by all the probabilities, the Dravidian languages. It is well known that the Muhammadans of this Presidency are much imbued with Hindu ways and customs and consist largely of converts from Hinduism who do not (as is the practice further north) change their language at the same time as their faith, but these figures go to show that as many as 17 per cent. even of those who claim to be of pure Musalman descent are either converts from other religions who speak their own vernaculars or are descendants of the original immigrants who have so far departed from their original traditions as to adopt in their houses the language of their Hindu neighbours. Another curious point bearing on the same matter is the proportion of the sexes among those who speak Hindóstání. Excluding the Labbais (among whom women are much more numerous than men, but who speak Tamil and so do not affect the argument), the proportion of the sexes among the Musalman tribes is very nearly equal. And yet the number of men who speak Hindóstání is nearly 10,000 greater than the number of women. The figures seem to point either to the marriage of Hindu converts by Muhammadan men or to a desire on the part of the men of mixed race to make themselves out to be descendants of the original Hindóstání-speaking immigrants.

268. *Tulu* is practically only spoken in South Canara, and there it is the prevailing language.

269. *Khond* is mainly used in the Ganjám and Vizagapatam agencies where the tribe which gives it its name is found.

The multiplicity of vernaculars.

270. Beyond these eight languages there is no vernacular which is spoken by as many as 50 persons in every 10,000 in the Presidency, but if the figures of the various districts are examined by themselves it will be found that there are several other tongues which within these smaller limits become of importance. In only seven districts out of the 25 * in the Presidency,—namely, Vizagapatam, Gódávari, Kistna, Nellore and Cuddapah (in all of which Telugu predominates), and Tanjore and Malabar (where Tamil and Malayálam respectively take the lead), do as many as 90 per cent. of the people speak the same language; while, in as many as four, namely, Ganjám Agency, Vizagapatam Agency, the Nilgiris and South Canara, not even 50 per cent. of the population have the same parent-tongue. In Vizagapatam Agency, for which complete figures have now for the first time been obtained, six different tongues,—Oriyá, Khond, Telugu, Savara, Porojá and Gadaba,—are shown to be spoken by at least 2 per cent. of the people; in the Nilgiris eight,—Tamil, Badaga, Canarese, Malayálam, Telugu, Hindóstání, English, and Kurumba; and in South Canara five,—namely, Tulu, Malayálam, Canarese, Konkaní and Maráthí. These figures demonstrate how considerable a linguist the official needs to be who aspires to talk to the people of these districts in the tongue best known to them. Ganjám and Vizagapatam and the Agencies belonging to them and the district of Bellary are usually included among "the Telugu districts" and Canarese is the official language of South Canara, but in Ganjám and in Vizagapatam Agency, Oriyá is the tongue most commonly spoken by the people; in Ganjám Agency, Khond; in Bellary, Canarese; and in South Canara, Tulu.

European languages.

271. The total number of persons speaking *European Languages* has fallen since 1891 from 49,999 to 40,489. The difference is due to the smaller number of British troops stationed in Bellary, Madras and Chingleput districts. The number is nevertheless 372 in excess of the number of Europeans and Eurasians in the Presidency, so this number of natives have returned English as their home-speech. In 1891 the number was 939. It is difficult to be certain how many of these 372 entries can be declared to be inaccurate. Among Native Christians and the best educated Hindus there are now a fair number who do actually use English in their households.

272. Of the European languages *Danish* is mainly spoken by the members of the Danish Lutheran Mission. They have four stations in South Arcot, in which district most of the entries occur.

273. *English* naturally occurs most frequently in Madras, where 15,644 persons have returned it as their mother-tongue. The Nilgiris comes next with 3,700.

274. The persons speaking *French* are mainly the members of the Jesuit and Roman Catholic Missions which are so strong in the southern districts and *German* is similarly mainly returned by those employed by the German Lutheran and Basel Missions which respectively flourish most in Tanjore and Nellore and on the west coast.

275. *Portuguese*, also called *Goanese*, was spoken by 2,011 persons, who mostly occur in Malabar and are nearly all Goanese Eurasians. They are evidently fast dropping this language in favour of others, as the numbers speaking it and Goanese together were 2,992 in 1891, and in 1881, 3,641.

276. The 30 persons in South Arcot who speak *Spanish* were sailors stopping at the port of Cuddalore.

* In the census statistics the three agencies are treated as separate districts.

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CHANGES IN THE ADMINISTRATION.

277. With a view to reduce the frequency of the transfers of divisional officers in this Presidency, it was decided during the year under report that the pay of Sub-Collectors and Head Assistant Collectors should cease to be attached to, or depend upon, the charge of any particular area and that officers of those ranks should be graded and should receive promotion ordinarily by seniority irrespective of the divisional or other charge which they might happen to hold.

RELATIONS WITH TRIBUTARY STATES AND FRONTIER AFFAIRS.

TRAVANCORE STATE.

(M.E. 1076—16TH AUGUST 1900 TO 15TH AUGUST 1901.)

[*Report on the Administration of Travancore for the year M.E. 1076.*]

General and Political.

278. The Maharajah, His Highness Sir Rama Varma, G.C.S.I., is a Kshatriya by caste and a Hindu by religion; his age is 44 and he has no male heirs. The First Prince, the Eliya Raja and the Senior Rani died during the year. On August 31st, 1900, two Princesses, Sétu Lakshmi Bhai and Sétu Parvathi Bhai were adopted by His Highness the Maharajah. The population of the State was 2,952,157 according to the census of 1901. The estimated gross revenue is Rs. 96,94,111 and the tribute due to the British Government is Rs. 8,10,652 a year. The actual strength of the military force was 1,372 (infantry 1,281, cavalry 61, artillery 30), excluding drummers, fifers and band. The principal articles of production are pepper, cardamom, cocoanut, areca-nut, tamarind, coffee, tea, jack, tapioca, yams, rice, horsegram, green-gram, dholl, gingelly, laurel-nut, teak and other timber. The manufactures include cocoanut, gingelly, lemon-grass and laurel-oils, jaggery, molasses, salt, arrack, cotton, cloth, yarn, coir rope, coir-matting, bricks, tiles and pottery. There are plumbago and mica mines in the State.

279. The Honourable Mr. G. T. Mackenzie, I.C.S., was Resident throughout the year.

280. His Excellency the Viceroy and Governor General of India, accompanied by Her Excellency Lady Curzon, visited the State in November 1900. Their Excellencies arrived at Quilon by sea on November 20th, and proceeded thence by boat to Trivandrum, the capital of the State, where their Excellencies were entertained by His Highness the Maharajah at a State banquet. His Excellency visited the principal public buildings and gardens. Their Excellencies left Trivandrum for Tinnevelly by road on November 23rd.

Administration of the land.
Land-revenue.

281. The total demand fell from Rs. 24,99,249 in M.E. 1075 to Rs. 24,29,406, the decrease being due to the credit of the proceeds of the sale of viruthi lands (Rs. 1,04,048) to a separate head of account. The ordinary land-revenue was more than in the previous year. On the other hand the remissions granted (seasonal Rs. 63,378, non-seasonal Rs. 55,311) were less than in M.E. 1075 (Rs. 85,643 and Rs. 56,245). The work of collection compares unfavourably with the work done in the previous year; of the net demand under current revenue 97·04 per cent. (Rs. 23,10,717) was collected during the year, a balance of Rs. 68,334 remaining uncollected, while only 14·37 per cent. of the net demand under arrears (Rs. 2,29,999) after deducting the amount written off as irrecoverable (Rs. 7,015), was collected, a balance of Rs. 1,96,921, of which Rs. 1,17,605 represents the Cochin desavazhi arrears, remaining uncollected at the close of the year. The total receipts under land-revenue (Rs. 22,75,461) were Rs. 82,108 less than in the previous year, but would have been Rs. 21,940 more than in M.E. 1075, if the sale proceeds of viruthi lands had been included under this head. There was a slight increase (Rs. 2,428) in the expenditure under land-revenue (Rs. 3,56,669).

Survey.

282. The area, which had been surveyed and made ready for settlement up to the end of the year, was 4,532·49 square miles comprising 27 taluks. The survey of three of the remaining four taluks was in progress. The total areas of fields demarcated, mapped and finished, the area of village maps republished and the number of field sketches duplicated were more than in M.E. 1075, and 9 charts and diagrams were published during the year, while 8 were published in the previous year; in other respects the work done by the Survey department was less than in M.E. 1075. On the other hand the cost of the department fell from Rs. 97,293 to Rs. 88,601. The number of persons who attended the Survey school (98) and the number of candidates who were declared to be qualified (71) were more than in the previous year (70 and 57).

Settlement.

Settlement operations were in progress in 16 taluks. The number of registration cases filed in 15 taluks (31,643) was considerably less than the number investigated (40,164) and the number adjudicated (39,585); the work in the remaining taluk had so far advanced that the new tax could be collected in M.E. 1077. During the year 1,602 appeals were decided and 960 were pending at its close. "Viruthi" settlement was completed in one taluk and was in progress in three other taluks. There was a slight increase (Rs. 4,220) in the cost of the department (Rs. 1,95,598).

Protection. Legislation.

283. The Council held three meetings. Four Regulations were passed. Regulation III of 1076 is an enactment framed on the lines of the Municipal Acts of British India. The Post Office Act (VI of 1898) of British India was extended to Travancore. Bills relating to the jurisdiction of Munsifs and Hindu religious and charitable endowments were referred to select committees.

Police.

284. The sanctioned strength of the police-force was raised by 32 to 1,732, the increase being rendered necessary by the construction of the Tinnevelly-Quilon Railway. The actual strength on the last day of the year was 1,725. The ratio of police to population and area was 1 to 2,102 persons and 5·05 square miles. The cost of the department rose by Rs. 10,333 to Rs. 2,21,198, the increase being mainly due to the abolition of the grade of sub-inspector and the creation of a new class (VII) of inspector on Rs. 30 per mensem, the increase of the pay of the VI class inspector from Rs. 30 to Rs. 35, the creation of a new grade of constable on Rs. 8 per mensem and the introduction of a uniform rate of horse allowance for all inspectors. The number of departmental punishments rose to 726 and the number of subordinates prosecuted for acts committed in their official capacity rose to 50, but the percentages of convictions in such cases were very low, being 14·2 in cases charged by the police and 11·1 in other cases. During the year 5,391 cases were reported, and 148 cases were pending investigation at the close of the year; only 27 were treated as undetected, while 1,912 were referred as false. Of 3,396 cases charged, 55·6 per cent. were under the Penal Code. The percentages of conviction showed improvement except in cases of dacoity. On the whole 88·01 per cent. of the cases charged ended in conviction against 84·8 per cent. in M.E. 1075. The percentages of recoveries of stolen property fell considerably in cases of robbery (55·07) and cattle theft (88·8) but showed a marked increase in cases of dacoity (35·5) and house-breaking and theft (80·1). The number of processes executed fell from 94,091 to 88,585, the decline being marked in petty cases (—4,944). The number of known depredators registered rose from 1,290 to 1,563.

Criminal Justice.

285. The number of courts having criminal jurisdiction was 66, two second judges of district courts being appointed additional sessions judges and a second class magistrate's court being opened at Tenmalai on account of the construction of the Tinnevelly-Quilon Railway. The total number of offences reported fell to 18,309, the decrease of offences under the Penal Code amounting to 1,423 cases. There were 16,455 cases reported as true. Of 22,229 persons brought to trial 13,873 were discharged or acquitted and only 7,243 were convicted. The percentage of convictions under the Penal Code rose to 25·11 while the percentage of convictions under special and local laws fell to 80·23. Of 104 convicted juvenile offenders only seven were transferred to the Reformatory. Of the persons convicted by magistrates 60·12 per cent. were punished with fine only. The average duration of cases before magistrates after the appearance of the accused was 20 days in preliminary enquiries and 8 days in trials. Out of 923 appeals for disposal by District magistrates 876 were decided; the average duration fell from 15 days in the

previous year to 13 days. The percentage of appeals which ended in confirmation fell from 57·06 to 54·73. Only 127 cases involving 249 persons were committed to the sessions courts against 178 and 754 in M.E. 1075, the decrease being due to the occurrence of the Shencottah riots in the previous year. Of 142 cases for disposal 134 were decided. Of the persons tried 58·58 per cent. were convicted. The average duration of cases in the sessions courts rose from 8 to 9 days. The number of appeals preferred to the sessions courts was 168 or 57 less than in M.E. 1075, the decrease being due to the diminution in the number of persons convicted by first class magisrates. Of 185 appeals for disposal, 183 were decided ; the average duration fell to 18 days. Of the appeals 43·75 per cent. resulted in confirmation and 32·19 in reversal against 43·65 and 34·84 in the former year. The number of cases referred to the High Court for confirmation rose from 5 to 14 and the average duration in disposal was 3 days, excluding time occupied in translating records, etc. The number of appeals to the High Court fell from 242 affecting 449 persons to 86 affecting 126, the heavy file in M.E. 1075 being due to the Shencottah riots. The percentage of appeals which ended in confirmation rose from 42·09 to 60·19 and the percentage of reversals fell from 30·51 to 14·63. The High Court decided 318 revision cases. In 33·33 per cent. the decisions of subordinate courts were quashed against 23·34 in M.E. 1075. The percentage of cases in which the High Court refused to interfere fell from 69·53 to 56·61. The receipts and charges under 'Criminal Justice' fell from Rs. 37,623 and Rs. 1,82,580 to Rs. 31,638 and Rs. 1,79,473 respectively.

Jails.

286. There were one central jail and two district jails as in the previous year. The average daily strength in the central jail was 567·89 against 639·61 in M.E. 1075. The average gross cost per head rose from Rs. 76 to Rs. 84. The health of the prisoners in the jail was far from satisfactory. A committee has been appointed to enquire into and report on the subject. The average daily strengths in the Quilon and Alleppey district jails were 87 and 64·12 respectively. There was a slight decrease (Rs. 910), in the total expenditure on the jails, which amounted to Rs. 57,647. The receipts from jails, however, fell from Rs. 9,896 to Rs. 5,868 ; the large decrease is explained to be due to smaller receipts from jail manufacture brought to account within the year.

Civil Justice.

287. The additional munsif's court temporarily established in M.E. 1075 having been abolished, the number of courts having civil jurisdiction fell to 27. During the year, 37,365 original suits and 2,919 appeals were filed, the corresponding figures for M.E. 1075 being 39,602 and 3,243 ; the decrease in original suits occurred almost entirely in the munsifs' courts. The numbers of original suits for disposal in munsifs' and district courts were 44,535 and 1,924 respectively against 47,670 and 1,798 in the previous year, and the numbers of suits decided in each class of courts were 36,679 and 1,270, the corresponding figures for M.E. 1075 being 40,230 and 1,182 ; the arrears rose from 7,440 and 616 to 7,856 and 654 respectively, but the numbers of suits pending for more than one year were diminished. The average period for which contested suits were pending before disposal rose in the munsifs' courts from 5 months and 15 days to 6 months and 6 days and in district courts from 7 months and 25 days to 8 months and 27 days. The number of appeals for disposal in district courts was 2,845 and the number decided was 2,130, the corresponding figures for M.E. 1075 being 3,278 and 2,525 respectively. The time taken in disposing of regular appeals rose from 3 months and 24 days to 4 months and 10 days. The numbers of first and second appeals for disposal before the High Court rose from 348 and 439 to 447 and 512 respectively, and 701 appeals were decided against 592 in M.E. 1075, but the arrears rose from 195 to 258 ; the average time occupied in disposal rose from 4 months and 13 days to 5 months and 9 days in first appeals and from 3 months and 4 days to 3 months and 21 days in second appeals ; the percentage of orders of confirmation declined from 56 to 53 in appeals from original decrees and from 74 to 63 in appeals from appellate decrees. A sum of Rs. 2,500 was allotted for improving the Law library of the High Court. There was a slight decrease (Rs. 3,442) in receipts under 'Civil Justice' (Rs. 5,95,360), while the charges increased from Rs. 3,03,612 to Rs. 3,34,177.

Registration.

288. The number of registration offices continued to be 47. The number of instruments presented for registration rose from 148,446 to 162,896. Of 162,932

instruments for registration 162,796 were registered, their aggregate value being Rs. 3,52,86,846, the corresponding amount in M.E. 1075 being Rs. 3,13,50,665. Seventy-three instruments were refused registration. Of the instruments registered 97 per cent. related to immoveable property and 58 per cent. to mortgages. The receipts rose by Rs. 22,168 to Rs. 2,64,162 and the expenditure fell by Rs. 2,569 to Rs. 99,363. The entertainment of 30 additional clerks was sanctioned and the Director's pay was raised from Rs. 350 to Rs. 400 per mensem.

289. The number of vessels which called at the ports advanced from 531 with a tonnage of 300,829 in M.E. 1075 to 621 with a tonnage of 330,915 tons. The receipts rose from Rs. 19,288 to Rs. 25,140 and the charges rose from Rs. 15,385 to Rs. 23,092. Marine.

290. The season was generally more favourable for agriculture than in M.E. 1075. The mean of the rainfalls recorded at 39 stations during the year was 91·54 inches and was 12·29 inches above the normal mean. Production and Distribution. Weather.

291. The staff of the Forest department consisted of 237 permanent and 322 temporary hands. For fire protection, cardamom collection etc., 179 men were also engaged for portions of the year At the commencement of the year there were 794 square miles of reserved lands and 819 square miles of reserved forest; at the close of the year there were 774 square miles of reserved lands and 1,026 square miles of reserved forest. There were in addition 496 square miles of reserved forest and 5 square miles of reserved land under the Cardamom department. Preliminary working plans were introduced in 16 reserves. Only Rs. 8,805 were spent out of Rs. 12,600 allotted for communications and buildings. Of 304 cases for disposal, 242 were disposed of against 223 and 187 in M.E. 1075. The amount of compensation realized in 132 cases rose to Rs. 1,421 from Rs. 476 realized in 72 cases in the previous year. The average delay in the disposal of cases was 90 days. The revenue derived from the sale of minor forest produce rose from Rs. 12,987 to Rs. 23,738. The total receipts under Forests rose from Rs. 5,09,125 to Rs. 5,41,533 while the expenditure fell by Rs. 6,013 to Rs. 3,30,859; these figures do not include the receipts and expenditure under Cardamoms. The receipts from cardamoms fell from Rs. 1,36,442 to Rs. 86,813 on account of the postponement of the collection of the land tax as the crop was poor; the expenditure fell from Rs. 53,929 to Rs. 37,902. The total area of cardamom gardens was 15,649 acres. Following the example of European planters, the ryots have adopted an improved system of cultivation. Forests.

292. During the year 2,781 persons were employed in six factories. Wages ranged from 2 chakrams 12 cash (about 1½ annas) to 20 chakrams (about 11 annas) per diem, the higher rates being allowed to artisans. The value of imports and exports, exclusive of transactions on account of Government, rose from Rs. 93,94,050 and Rs. 1,69,47,824 to Rs. 1,03,39,488 and Rs. 1,69,85,774. The imports of all articles except rice increased; the exports of the several products of the cocoanut which represent 48 per cent. of the entire export trade fell by Rs. 7,51,377 on account of the poor crop. The bulk of the trade (89·5) was with British India. Factories. Trade.

293. An audit branch was created in the Chief Engineer's office. A departmental code written on the lines of the British Public Works Department Code was sanctioned. The expenditure in the Chief Engineer's department and in the Maramat department rose by Rs. 2,48,597 and Rs. 88,812 to Rs. 17,39,248 and Rs. 4,90,189 respectively. The cost of establishment rose from Rs. 2,29,119 representing 18·80 per cent. of the actual outlay on works to Rs. 2,50,068 representing 17·34 per cent. of the actual outlay on works. The Quilon-Shencottah road was restored. Negotiations for the construction of a road from the Coimbatore frontier to the High Range were carried on. On the Kothayar project, Rs. 2,81,874 were expended, the total amount spent on it up to the end of the year being nearly Rs. 16½ lakhs. Except in a portion near the right bank the foundation of the dam has been completely excavated and concrete has been laid. The work on the left bank and Thiruvancode channels was continued and the investigation of the right bank channel was begun. The amount of Rs. 14,75,854 Public Works.

Railways. advanced to the South Indian Railway Company on account of the Tinnevelly-Quilon Railway was repaid. Lands required for 56 miles of the line were acquired and handed over. The acquisition of land for the Cochin Railway was completed.

Anchal or Post offices. 294. During the year 2 anchal-offices, 12 village-offices, 2 letter-boxes and 3 wooden boxes were newly opened and 2 pillar-letter-boxes were closed; the number of anchal-offices and letter-boxes rose, therefore, to 115 and 138 respectively. On the average there was one anchal-office or letter-box for every 28 square miles and 11,668 persons. The increases in the numbers of private and official covers and cards posted were 277,034, 81,406 and 98,782 respectively, the total number of covers posted being 3,317,981. The number of covers delivered rose to 3,298,145 while 11,896 were received in the dead-letter office. The actual receipts rose from Rs. 61,284 to Rs. 62,427; the amount chargeable on official covers was Rs. 2,35,842. The cost of the department advanced to Rs. 80,111 from Rs. 75,994 in M.E. 1075. The length of mail-communication rose from 831 to 852 miles. The rates of postage charged on letters not exceeding $\frac{1}{2}$ tola and one tola in weight were reduced to 12 cash ($\frac{3}{7}$ anna) and 1 chakram ($\frac{4}{7}$ anna) from 1 chakram and 2 chakrams respectively; the rate for every additional tola or fraction thereof was reduced from 2 chakrams to 1 chakram ($\frac{4}{7}$ anna) and the fee for registration was reduced from $3\frac{1}{2}$ chakrams to 3 chakrams ($1\frac{5}{7}$ annas).

Revenue and Finance. Gross Revenue. 295. The revenue and expenditure of the State were the highest on record. Excluding a recredit from the unadjusted balance of the Department of Public Works and the proceeds of the sale of viruthi service lands, the revenue, exclusive of debt heads, amounted to Rs. 95,90,063 and, inclusive of debt heads, to Rs. 99,17,170, the corresponding figures for M.E. 1075 being Rs. 93,67,879 and Rs. 94,27,202. The expenditure, exclusive of debt heads, amounted to Rs. 95,84,590 and, inclusive of debt heads to Rs. 96,55,757 against Rs. 92,44,579 and Rs. 96,24,202 respectively in the previous year. The closing balance (including debt heads and viruthi receipts) was Rs. 1,02,07,332 and comprised the following items:—cash, Rs. 23,44,631, promissory notes Rs. 68,53,334, goods Rs. 8,80,630 and fixed deposits in banks Rs. 1,28,737. The balance in Government securities was the same as in M.E. 1075.

Salt. 296. On account of heavy rains before and during the manufacturing season, the amount of home salt manufactured fell from 231,647 to 145,406 maunds. During the year 208,709 maunds of home salt and 483, 226 maunds of Bombay salt were sold, the corresponding figures for M.E. 1075 being 200,324 and 449,607. The annual consumption of salt per head of population was 19·3 lbs. The gross receipts rose by Rs. 1,53,983 to Rs. 21,60,336; the net revenue rose from Rs. 16,07,601 to

Excise. Rs. 17,19,641. The amount of tobacco sold rose from 10,796 candies to 11,269 candies and the net revenue rose from Rs. 9,53,473 to Rs. 9,98,189. The net revenue under abkári, opium and bhang fell by Rs. 1,489 to Rs. 6,97,113. The net revenue from customs increased from Rs. 7,29,076 to Rs. 7,29,693. Three new chowkeys were established and the duties on several classes of timber revised. The revenue

Stamps. from stamps rose from Rs. 3,83,589 to Rs. 4,10,669 and the expenditure fell from Rs. 37,890 to Rs. 20,834. The net revenue rose by Rs. 44,139 to Rs. 3,89,835.

Mint. There were 125,445 silver fanam pieces, 6,97,244 silver chakrams and 1,753,751 copper cash coined. On account of the facility with which silver chakrams can be counterfeited, it was decided to issue silver coins of the value of two chakrams ($1\frac{1}{7}$ annas) and copper coins of the value of 1 chakram, 8 cash and 4 cash ($\frac{4}{7}$, $\frac{2}{7}$, $\frac{1}{7}$ anna) in addition to the coins now in use, and 105 silver two-chakram pieces and 24,925 copper chakrams, 202,949 copper eight-cash pieces were coined. The cost of the mint was Rs. 8,627 and the net profit amounted to Rs. 9,053.

Vital Statistics, etc. Births and Deaths. 297. The number of births registered fell from 56,111 to 53,481 and the number of deaths registered rose from 40,957 to 46,548. The rates of births and deaths registered per mille per annum were 18·1 and 15·8 respectively. The registration appears to be incomplete. The increase in the number of deaths is attributed mainly to an unprecedented outbreak of cholera which resulted in 10,508 deaths.

Medical relief. 298. In addition to the Durbar physician there were 71 medical officers in the department. During the year 13,223 in-patients and 425,210 out-patients were treated, the corresponding figures for M.E. 1075 being 12,966 and 444,853 respec-

tively. The mortality among in-patients rose from 4·61 to 4·96 per cent. The marked decline in the number of out-patients is ascribed to favourable climatic influences. The number of patients treated in the Maternity hospital fell from 1,109 to 553 on account of the negligence of the medical officer in charge. There were 28 midwives who attended 890 cases in the aggregate. In the Lunatic asylum 138 patients were treated and 246 in the Leper asylum; of the latter 95 were discharged. Eight European institutions and 45 " Vydiasalas" received grants. The total expenditure in the Medical department exclusive of charges for buildings and furniture fell from Rs. 2,43,580 to Rs. 2,30,759 and the receipts rose from Rs. 3,409 to Rs. 3,746. The sale of chlorodyne at post offices has been discontinued on account of the dangerous nature of the drug. In the Veterinary hospital 183 animals were treated against 175 in the previous year; of these 177 were discharged cured. The cost of the Sanitary department fell from Rs. 65,620 to Rs. 63,124, the decrease being due to the purchase of conservancy appliances in M.E. 1075. The number of vaccinations rose from 1,35,450 to 1,53,785 and the percentage of successful operations from 83·6 to 88·6. The number of deaths from small-pox advanced, however, from 365 to 1,815.

Sanitation.

Vaccination.

299. The numbers of schools and pupils rose from 3,637 and 177,699 to 3,683, and 184,639 including 44,974 girls, the increase occurring chiefly in primary institutions. The number of Government schools (429) remained unaltered but the number of pupils attending them rose from 43,826 to 45,834. The numbers of private aided and unaided schools rose from 931 and 2,277 to 941 and 2,313 respectively and the numbers of pupils attending them rose from 49,887 and 83,986 to 51,383 and 87,422 respectively. The number of English schools rose from 99 to 106 and the number of pupils attending them rose from 13,377 to 13,917. It is estimated that 45 and 15·2 per cent. of the male and female populations of school-going age were under instruction. As two Government training schools for teachers at Trivandrum were amalgamated into one, there were only two such institutions at the close of the year. The number of aided training schools fell from 4 to 3. The strength of Government training schools rose from 71 to 73 and the strength of the private training school from 53 to 65. The percentage of teachers with special qualifications in Government schools (21) increased considerably and in private aided and unaided schools the proportions of unqualified teachers (55 and 89 per cent.) were less than in M.E. 1075. The numbers of pupils in the Maharajah's colleges for boys and girls at Trivandrum were 159 and 2 respectively. A professor of history was newly appointed in the college for boys; a scheme relating to the teaching of chemistry and advanced physics was under consideration. The strength of the Government Law College rose from 166 to 194; an assistant professor was appointed. The number of private arts colleges continued to be three. The school attached to the Agricultural Demonstration Farm was temporarily discontinued with a view to start it again on better and broader lines. Twelve apprentices attended the Industrial School of Arts, 119 pupils attended a private technical institute and 23 pupils attended the C.M.S. Industrial School, Kottayam. There were 25 boys in the Reformatory at the beginning of the year and 21 at its close. Rules for the guidance of the Text-book Committee were published. The total cost of the Education department rose by Rs. 38,219 to Rs. 5,31,851 and the total receipts rose by Rs. 19,939 to Rs. 1,20,636. The net cost was therefore Rs. 4,11,215.

Education.

COCHIN STATE.

(M.E. 1076—16TH AUGUST 1900 TO 15TH AUGUST 1901.)

[*Report on the Administration of Cochin for the year M.E. 1076.*]

300. The Raja of Cochin, His Highness Sir Sri Rama Varma, K.C.S.I., belongs to the Kshatriya caste; his religion is Hinduism. He was educated privately in English, Malayalam and Sanskrit. He is 49 years of age and has male heirs. The Senior Rani died on 26th January 1901. The population of the State was 812,025

General and Political.

according to the census of 1901; the gross revenue is estimated to be about 23 lakhs of rupees and the annual tribute to be paid to the British Government is 2 lakhs of rupees. The strength of the State's military force is 318. The principal articles of production and manufacture are paddy, cocoanut, coffee, pepper, timber, cardamoms, areca-nuts, hides, cocoanut-oil, coir-yarn, coir-mats and grass-mats. The Honourable Mr. G. T. Mackenzie, I.C.S., was Resident throughout the year. Their Excellencies the Viceroy and Lady Curzon arrived at Bolghatty by sea on a visit to the State on the 18th November 1900. On the following day His Excellency visited the Ernaculam College and was entertained by His Highness the Raja at a State banquet. Their Excellencies left Bolghatty by sea on the 19th November.

Administration of the land. Land-revenue.

301. The current demand of land-revenue (including devaswam) amounted to Rs. 7,72,295, of which Rs. 7,69,999 or 99·7 per cent. were collected. Of the arrears (Rs. 42,132) Rs. 9,704 were written off the accounts and Rs. 18,528 were collected, leaving a balance of Rs. 13,900 ranging over 79 years (M.E. 997—1075). The revenue appears to be paid without difficulty as moveable property was sold in six cases only and in no case were the defaulter's rights in his land sold. The expenditure under land-revenue rose by Rs. 2,075 to Rs. 96,755, and Rs. 61,674 were spent on survey.

Protection. Legislation.

302. Eight regulations were passed during the year and twelve bills were under the consideration of the durbar at the close of the year.

Police.

303. The sanctioned strength of the police-force was 70 officers and 424 men, but the actual strength at the close of the year was 68 officers and 416 men. On the average there was one member of the force to every 1,678 persons and 2·8 square miles. The number of departmental punishments rose from 156 to 285. Policemen were prosecuted in 34 cases, two of which were brought departmentally; only two cases, including one of the cases brought departmentally, ended in conviction. Of 909 cases of grave crime requiring investigation during the year 467 were charged, 331 were referred as false and 59 were struck off as undetectable; at the beginning of the year 89 cases were pending with the police and at its close 75; during the year 397 persons were convicted and 93 were acquitted. The percentage of lost property which was recovered increased from 42 in the previous year to 54. The average duration of investigation of cases charged rose from 15 to 16·8 days. The number of known depredators on the register was 575.

Criminal Justice.

304. The number of cases for disposal by the magistracy was 3,990, of which 3,956 were decided; of the latter 76·5 per cent. related to offences under the Penal Code. Of 7,654 persons accused in the decided cases 1,436 were convicted and 5,920 were acquitted or discharged. Of the persons convicted 566 were punished with fine only and 65 with whipping only. Of sentences against which appeals were filed, 68 per cent. of those passed by District magistrates and 58 per cent. of those passed by subordinate magistrates were confirmed. During the year 275 appeals were preferred to District magistrates and all but two were decided during the year. In 48 cases decided by the sessions courts, 92 persons were accused and 39 of these were convicted; the sessions courts received and decided twelve appeals; the sentences passed on 13 of the 19 appellants were confirmed, while those on 3 appellants were reversed. The Chief Court received and decided 20 appeals, in which 45 persons were concerned. The sentences on 39 appellants were confirmed and the sentence on one appellant was reversed. The receipts under 'Criminal Justice' rose by Rs. 1,168 to Rs. 4,876, while the expenditure advanced by Rs. 345 to Rs. 35,724.

Jails.

305. There were, as in the previous year, one central and 7 subsidiary jails. The average number of convicts imprisoned daily in the central jail rose from 186 to 223. The cost of the central jail increased from Rs. 12,415 to Rs. 14,493, but the average expenditure per head fell from Rs. 66 to Rs. 64. The total cost of the subsidiary jails was Rs. 3,150. A regulation relating to the management of prisons was passed during the year.

Civil Justice.

306. By the Chief Court Regulation and the Civil Court Regulation, which were passed during the year, the designation of the "Appeal Court" was changed to "the Chief Court," His Highness the Raja's Court of Appeal was abolished,

Zillah courts were designated "District courts" and the jurisdiction of munsifs was raised from Rs. 500 to Rs. 1,000 in regular suits and from Rs. 25 to Rs. 50 in small causes. The number of civil courts remained unaltered. The total number of suits, original and appellate, was 11,966, of which 11,351 were decided; the arrears fell from 668 to 615. The number of cases decided by munsifs (10,011) was less than the number filed during the year (10,026), and less than the number decided in M.E. 1075 (10,480). The average duration of ordinary contested suits in munsifs' courts rose from 70 to 75 days and in district courts declined from 269 to 233 days. Of the munsifs' decrees, against which appeals were filed, 53 per cent. were confirmed. The corresponding percentage of decrees passed by district courts which were confirmed on appeal was 50 per cent. There were 825 ordinary appeals for disposal by District judges, and 652 were decided, the balance pending at the end of the year (173) being one less than the number pending at the beginning; the average duration of appeal-suits rose to 108 and 145 days in each of the two courts. Of 277 appeals for disposal by the Chief Court, 246 were decided, the balance (50) pending at the beginning of the year being reduced to 31 at the end of the year. The number of cases pending in His Highness the Raja's Court of Appeal was 28 at the beginning of the year; during the year 7 appeals were received and 17 were decided, the number of cases pending at the close of the year being 18. The receipts on account of 'Civil Justice' were Rs. 1,61,601 and the expenditure was Rs. 89,069.

Registration.

307. The number of registry offices continued to be 15. The aggregate number of documents registered during the year was 33,478, the number in M.E. 1075 having been 32,030. Of these 33,345 or 99·6 per cent. were registered on the day of presentation. Registration was refused in 78 cases. The total value of property to which the registered deeds related advanced to Rs. 1,13,94,892. The receipts and expenditure of the department amounted to Rs. 48,102 and Rs. 23,746, the net revenue being Rs. 24,356 or Rs. 1,975 more than in M.E. 1075.

Military.

308. The infantry and artillery with a strength of 282 and the body-guard with a strength of 16 cost the State Rs. 37,735 or Rs. 249 more than in the previous year.

Marine.

309. The 102 vessels which entered and cleared at the sirkar port of Malipuram had an aggregate tonnage of 86,263 tons. The port dues amounted to Rs. 6,000, being Rs. 63 more than in the preceding year.

Production and Distribution.

Weather.

Forests.

310. The mean of the rainfalls recorded at 3 stations was 92·89 inches, the means in M.E. 1074 and M.E. 1075 being 91·91 and 92·17 inches respectively. The south-west monsoon set in on 4th June three days earlier than in the previous year. The season was not unfavourable to agriculture. It is reported that there was a marked decrease in forest thefts. Of 72 forest cases decided by magistrates 44 ended in conviction. The demarcation of the forests was begun and some working schemes were introduced. The alignment of a tramway (15·4 miles long) and two timber slides (2·68 miles) were surveyed. Timber was sold to the Madras and South Indian Railway Companies, the Gun Carriage Factory, Madras, and the Cordite Factory, Coonoor. The receipts advanced from Rs. 3,11,382 to Rs. 5,08,112, and the expenditure from Rs. 1,77,959 to Rs. 3,55,836, the net revenue having therefore increased by Rs. 18,853 to Rs. 1,52,276. The only article imported by sea at Malipuram was sulphur, the value of the amount imported being Rs. 2,700. The only exports were 3 canoes (Rs. 60) and 7 cwts. of coir rope (Rs. 35), their total value being Rs. 95. The amount spent on public works was Rs. 4,70,824, which is Rs. 64,010 more than the amount spent in the previous year. During the year under report 448 miles of road were maintained. The net expenditure on the Cochin State Railway was Rs. 26,60,562. A revised estimate for the railway amounting to nearly Rs. 58¼ lakhs was received. As four new anchal-offices were opened, their number rose to 32 and the length of the anchal line advanced from 228 to 245 miles. The staff of the department was strengthened. The number of articles given out for delivery rose by 20 per cent. to 660,307, but the number of communications received from British Post offices fell from 127 to 6, on account of the opening of British Post offices in the State. In the dead-letter office, 1,877 articles were dealt with. The receipts declined by Rs. 293 to Rs. 7,946 and the expenditure increased by Rs. 137 to Rs. 15,771.

Trade.

Public Works.

Railways.

Anchal or Post offices.

Revenue and Finance.

311. The total receipts and expenditure under service heads amounted to Rs. 27,61,304 and Rs. 25,14,026, respectively, the corresponding figures for M.E. 1075 being Rs. 22,96,258 and Rs. 22,06,925. The cash balances in the treasuries at the beginning and close of the year were Rs. 2,18,401 and Rs. 3,08,816, respectively. To raise money for expenditure on the Cochin State Railway, Government of India promissory notes for Rs. 16,66,000 were sold during the year for Rs. 15,88,410 and a railway debenture loan of Rs. 10,00,000 was raised. A temporary loan of Rs. 2,75,000 was also raised but this loan was repaid during the year as well as a loan of Rs. 1,00,000 raised in M.E. 1075. At the close of the year, the State held Government of India promissory notes for Rs. 8,75,800 in addition to its cash balance.

Customs.

312. The amount collected on account of customs was Rs. 1,146 and the amount recovered under the Interportal Trade Convention from the British Government

Salt.

was Rs. 2,21,000 for the years M.E. 1075 and 1076. The quantity of salt sold during the year was 172,064 maunds and was 12,442 maunds more than the quantity sold in the previous year. The average consumption per head of population fell from 18·16 lbs. to 17·4 lbs. The receipts advanced by Rs. 40,919 to Rs. 5,08,886 and the expenditure fell by Rs. 1,753 to Rs. 98,912; the net revenue was Rs.

Excise.

4,09,974. There was a marked increase in the receipts from licenses for the sale of tobacco which rose from Rs. 14,177 to Rs. 21,540. The total revenue from abkári advanced from Rs. 1,17,350 to Rs. 1,19,773. The revenue from opium rose by Rs.

Stamps.

246 to Rs. 24,630. For the payment of process fees adhesive stamps were introduced. The receipts advanced from Rs. 2,13,008 to Rs. 2,68,816 and the expenditure fell from Rs. 17,647 to Rs. 11,256.

Vital Statistics, etc.

Census.

313. The total population according to the census of 1901 was 812,025, of whom 405,200 were males and 406,825 were females. The registration of births and

Births and deaths.

deaths continued to be unsatisfactory, as only 5,267 births (6·5 per mille) and 6,446 deaths (7·9 per mille) were registered. The mortality from cholera rose from

Medical relief.

129 to 824. There were nine hospitals and four dispensaries, as well as two temporary Railway dispensaries; temporary dispensaries were also opened at Kanjirapalli and Choverah for 3½ months during His Highness the Rajah's stay at those stations. Of 3,986 in-patients 352 (9 per cent.) died. The number of out-patients treated fell from 194,589 to 178,709. In the Lunatic Asylum, 13 patients were treated. The total expenditure of the department rose from Rs. 59,930 to

Sanitation.

Rs. 63,025. The expenditure on sanitation and conservancy rose by Rs. 9,540 to Rs. 28,394, the increase being due to the purchase of latrines and lamps, to the acquisition of lands and to increased attention to conservancy in connection with

Vaccination.

the visit of His Excellency the Viceroy. During the year 25,662 vaccine operations were performed, of which 23,121 (90 per cent.) were successful, the figures for M E. 1075 being 22,851 and 20,224. The cost of the department rose from Rs. 4,037 to Rs. 4,230.

Education.

314. The total number of schools and pupils rose from 1,239 and 36,893 to 1,289 and 39,600 (27,837 boys and 11,763 girls), respectively. The increase was specially marked in special institutions which increased from 284 to 386, while the number of pupils attending them rose by 2,146 to 7,904. The special schools included 107 Sanskrit, 65 Arabic, 4 Hebrew, 83 Music, 118 Bible, 4 Industrial, 1 Guzerati and 3 Hindustani schools. The number of Government and unaided primary institutions fell by 2 and 64 to 45 and 726, respectively, while the number of aided primary schools advanced by 14 to 104, but the number of pupils attending primary institutions rose from 28,844 to 29,139. It is estimated that 46 per cent. of the boys of school-going age and 19 per cent. of the girls of the corresponding age attended schools. The total and net expenditure on education rose from Rs. 97,569 and Rs. 65,840 to Rs. 99,331 and Rs. 69,645 respectively.

PUDUKKÓTTAI STATE.

(FASLI 1311—1ST JULY 1901 TO 30TH JUNE 1902.)

[*Report on the administration of Pudukkóttai for fasli 1311.* (*1901–1902.*)]

General and Political.

315. His Highness Sri Brahadamba Das Raja Martanda Bhairava Tondiman Bahadur, Raja of Pudukkóttai, belongs to the Kallar caste and is a Hindu (Sivaite) by religion. His education was supervised by an English tutor. He is 26 years of age and is not married. His nearest male heir is his paternal uncle's son, Bala Subramanya Raghunatha Tondiman, who was educated at the Presidency College, Madras, and passed the Matriculation examination of the University of Madras. The population of the State was 380,440 according to the census of 1901. The gross revenue is estimated to be 11 lakhs of rupees. The Rajah pays no tribute. The State military force consists of 125 infantry and the Rajah's body-guard of three officers and 16 men; of 17 guns only six are used, the remainder being unserviceable. Paddy and other grains, red ochre, iron and granite are the principal articles of production. The Collector of Trichinopoly is *ex-officio* Political Agent for Pudukkóttai.

Administration of the land.

Land-revenue.

316. The arrears of land-revenue, other than quit-rents, amounted to Rs. 1,23,711 at the beginning of the fasli; Rs. 52,956 were collected during the year and Rs. 4,729 were written off, leaving a balance of Rs. 66,026 relating to 26 years. The arrears of quit-rents at the beginning of the fasli amounted to Rs. 1,53,392, to which were added Rs. 7,113, the arrears due on inam-lands enfranchised during the year; Rs. 16,521 were collected and Rs. 10,374 were written off during the year. The current demand of land-revenue rose from Rs. 7,08, 954 in fasli 1310 to Rs. 7,18,196 owing to extension of cultivation and miscellaneous receipts; no remission can be granted under the revenue-system of the State, but enquiries relating to Rs. 23,669 were pending at the close of the fasli and this amount was practically suspended; of the remainder (Rs. 6,94,527) Rs. 6,55,590 or 94·39 per cent. were collected. The number of cases in which moveable property was sold fell from 126 in the previous fasli to 82, and the number of cases in which immoveable property was sold fell from 296 to 211. The expenditure under land-revenue fell from Rs. 72,431 to Rs. 68,877. Cadastral and theodolite surveys were carried on in two taluks. The expenditure on survey declined from Rs. 28,147 to Rs. 21,401 and the total cost of the survey up to the close of the fasli amounted to Rs. 2,48,577. The cost of the Inam Settlement department fell from Rs. 8,879 to Rs. 8,575; the total cost of the department up to the end of the year was Rs. 1,92,432 and the additional revenue in the shape of quit-rents was Rs. 1,37,207 a year. There were about 71,000 acres of unoccupied arable land in the State.

Survey.

Settlement.

Waste lands.

Protection.

Legislation.

Police.

Criminal Justice.

Prisons.

Civil Justice.

Registration.

317. Three regulations were passed; they related to the prevention of cruelty to animals, to tolls and to glanders and farcy. The number of cases reported by the police rose from 1,467 in the previous year to 1,558; the percentage of detection fell from 94 to 93 and that of convictions from 57 to 55. The number of magistrates was reduced by one to 13. During the year 3,145 cases involving 5,162 persons were before magistrates, the number in the previous fasli being 2,864 involving 4,937 persons. Of these cases 3,057 were decided. The Court of Sessions decided 12 cases involving 16 persons, leaving no arrears. Of 106 appeals filed in the Chief Magistrate's Court 105 were decided. The Court of Session decided all the eight appeals for disposal by it. The Chief Court decided seven out of eleven for disposal. The Chief Magistrate's Court passed orders on 48 petitions for revision, leaving no arrears, and the Chief Court disposed of 49 out of 71 such petitions. One subsidiary jail having been abolished, there were one central jail and five subsidiary jails at the close of the year. At the beginning of the year there were 113 prisoners; during the fasli 682 were admitted and 728 were discharged. The convicts enjoyed good health. An additional small cause court was established during the year. The numbers of original and small cause suits for disposal rose from 1,663 and 3,302 to 1,826 and 3,843 respectively; 1,534 of the former and 3,659 of the latter were decided. The Chief Court decided 74 out of 100 appeals for disposal. The quantity of work done by all the courts was more than in the previous year, but the arrears in the Chief Court were still heavy. The number of documents registered in the twelve registry offices fell from 23,410

in fasli 1310 to 21,815; the decline is attributed to the favourable character of the season. Of the total number of documents 94·95 per cent. were registered within a week of presentation. The receipts of the department fell from Rs. 29,456 to Rs. 28,510, but the expenditure rose from Rs. 18,675 to Rs. 18,692.

Production and Distribution.

Weather and crops.

Forests.

Public Works.

318. The season was more favourable than in the previous fasli, the mean of the rainfalls recorded at the several stations rising from 32·36 inches to 53·94 inches. The average prices of the principal food-grains were easier than in the previous fasli. Pasture and fodder were generally insufficient. The current demand of forest-revenue rose from Rs. 28,992 in fasli 1310 to Rs. 30,567, Rs. 29,710 of which were collected. The arrears of forest-revenue at the beginning of the year amounted to Rs. 11,404; Rs. 2,488 were collected and Rs. 3,758 were written off the accounts during the year. The cost of the forest-establishment and of the plantations declined from Rs. 1,652 and Rs. 8,032 to Rs. 1,635 and Rs. 7,399 respectively. The expenditure on public works rose from Rs. 1,09,529 to Rs. 1,30,623, of which Rs. 40,143 were spent on roads, Rs. 35,709 on irrigation and Rs. 35,160 on civil buildings.

Revenue and Finance.

Salt.

Excise.

319. The opening balance was Rs. 9,00,527, or Rs. 95,942 more than in the previous year. The receipts advanced from Rs. 11,54,250 to Rs. 11,97,413, mainly on account of the increase in the land-revenue. The expenditure fell from Rs. 10,58,308 to Rs. 10,31,719. The closing balance was therefore Rs. 10,66,221. A lakh of rupees of the surplus (Rs. 1,65,694) was invested in Government promissory notes, and the value of Government paper owned by the State rose to seven lakhs of rupees. Under the convention with the Government of Madras the latter paid Rs. 38,000 to the State on account of salt; the expenditure under salt amounted to Rs. 9,996. The total current demand under all heads of abkári-revenue rose from Rs. 56,351 to Rs. 56,568 and the whole of this amount was collected; the arrears amounted to Rs. 3,346, of which Rs. 586 were collected and Rs. 134 written off the accounts.

Vital Statistics, etc.

Births and Deaths.

Medical relief.

Vaccination.

320. The numbers of births and deaths registered were 4,396 and 4,131, the correspondingrates being 11·55 and 10·85 per mille. On the whole the public health was fair. The number of in-patients treated in the hospital rose from 370 to 400; in the dispensary for women and children 4,810 females and 4,815 children were treated; in the seven rural dispensaries the number of patients treated advanced from 41,851 to 42,584. The total cost of the department rose from Rs. 17,946 in the previous year to Rs. 28,991. The number of vaccinations performed rose from 8,313 to 9,740, of which 9,416 were successful; the cost of the department fell from Rs. 2,461 to Rs. 2,443.

Education.

321. The total number of educational institutions fell from 285 to 279 and the number of pupils declined from 8,744 to 8,591. There were 709 students in the college at the close of the year or 36 less than at the end of the previous year. The receipts under 'Education' fell from Rs. 14,589 to Rs. 13,938, but the expenditure increased from Rs. 36,348 to Rs. 37,301.

BANGANAPALLE STATE. (1901-1902.)

[*Administration Report of the Banganapalle State for the official year 1901-1902.*]

General and Political.

322. Saiyid Fath Alí Khán Bahádur, C.S.I., Nawab of Banganapalle, is a Musalman of the Shia sect. He was educated privately. He is aged 54 and has 3 sons, the eldest of whom is 28 years old. The population of the State, according to the census of 1901, is 32,264. Its gross revenue is estimated to be Rs. 95,885. The Nawab pays no tribute to the British Government and maintains no military force. The principal products are grains (cholam, sazza, korra and arika), indigo, oranges and mangoes. The manufactures include cloth and lacquered work. There is a small diamond mine in the State. The Collector of Kurnool is *ex-officio* Political Agent for Banganapalle.

Administration of the land.

323. Under land-revenue, etc., Rs. 11,816 were remitted during the year under sirkar and Rs. 4,857 under jaghirs. The total arrear-demand was Rs. 87,103, of which Rs. 33,663 were collected. The current demand amounted to Rs. 1,74,180,

of which Rs. 67,224 were collected. The total uncollected balance at the end of the year was Rs. 1,60,396. The theodolite survey of the whole State was completed. Land-revenue. Survey.

321. The strength of the police-force was 137 including 70 unpaid taliaries; there was one member of the force to every 235 persons and to every two square miles. The 8 vacancies which occurred during theyear were all filled. More cases were reported than in the previous year and the proportion of detected cases was much higher. The number of registered known depredators rose by 5 to 30. Of 263 cases for disposal by the Magistrate 242 were decided. Of 8 cases (including appeals and cases committed by the Magistrate's Court) for disposal by the Sadar Court, 7 were decided. Of 52 persons imprisoned in the only jail 32 were admitted during the year, 29 were released and 1 died. The Ameen's office was abolished on the death of the incumbent. Of 170 cases for disposal before the Adalat or Munsif's Court, 165 were decided. In the Sadar Court all the fifteen cases (including appeals) for disposal were decided. During the year 353 documents relating to property worth Rs. 36,789 were registered, the number of documents registered in the previous year being 191 relating to property worth Rs. 23,350. The receipts rose by Rs. 155 to Rs. 397. **Protection.** Police. Criminal Justice. Jails. Civil Justice. Registration.

325. The total occupied land including jaghirs and inam rose by 180 acres to 71,920 acres. The rainfall was generally insufficient and the harvest was poor. The rainfall registered was 16·41 inches. Prices of grains were slightly better than in the previous year. Of the allotment of Rs. 10,000 Rs. 6,350 were spent on roads, Rs. 2,700 on irrigation and Rs. 875 on buildings. The total amount spent was Rs. 9,925. **Production and Distribution.** Agriculture. Weather and crops. Public works.

326. The opening balance was Rs. 65,277; the current receipts during the year amounted to Rs. 1,15,835 including a loan of Rs. 19,950. The current expenditure amounted to Rs. 1,15,688, leaving a closing balance of Rs. 65,424. The opening and closing balances include Rs. 56,000 lent by Government for expenditure on survey. Rs. 4,872 were disbursed as takavi loans. The demand under abkári fell by Rs. 743 to Rs. 16,132 including Rs. 4,632 relating to the jaghirs. **Revenue and Finance.** Gross Revenue. Abkári.

327. The numbers of births and deaths registered were 582 (18 per mille) and 391 (12·1 per mille); the figures appear to be unreliable. Of 13,121 patients treated at the State dispensary, 13,040 were cured or discharged and 17 died. The average daily number of sick rose from 83·77 to 88·78. The midwife attended 49 cases of labour. During the year 514 children were vaccinated, the number vaccinated in the previous year being 463. Of the operations 430 were successful. **Vital Statistics, etc.** Births and Deaths. Medical Relief. Vaccination.

328. There were one Anglo-Vernacular school and 18 Telugu schools as in the previous year; the number of pupils in the former increased by 30 to 197 and the number of pupils attending the latter declined by 8 to 597. **Education.**

SANDUR STATE. (1901–1902.)

[*Administration Report of the Sandur State for the official year 1901–1902.*]

329. Raja Srimant Venkatrao Rao Sahib, Hindu Rao Ghorpade Mamlukatmadar, Senapati, Raja of Sandur, is a Mahratta Brahmin by caste and a Hindu by religion. He was born in 1892 and attends a public school at Bellary. His nearest male heir is his paternal uncle Maloji Rao Balasahib Ghorpade. His State had a population of 11,200 according to the census of 1901. The gross revenue is supposed to be Rs. 53,010. The Raja pays no tribute to the British Government and maintains no military force. The principal articles of production are cholam, tobacco, sugar-cane, jaggery and betel. The Collector of Bellary is *ex-officio* Political Agent for Sandur. **General and Political.**

330. The annual land-revenue is Rs. 18,000. During the year Rs. 20,311 were collected as land-revenue and profession-tax (*muhtarafa*). The British Revenue Survey department undertook the survey of the State, and proceeded with the field survey; but owing to the difficulty in procuring surveyors much progress was not made. **Administration of the land.** Survey.

Protection. Police. Criminal Justice.

331. The Police-force, consisting of 1 inspector, 4 head constables, and 25 constables, cost Rs. 2,745. Of 32 cases reported, 3 were referred as false and 23 were tried, of which 16 ended in conviction. In the Diwan's Court the number of cases decided rose from 126 to 203; 139 other cases were compounded. There were no arrears at the beginning and at the close of the year. The average duration of cases from date of complaint to date of disposal and the average duration of trials after the presence of the accused was secured were 5·86 and 1·15 respectively, the corresponding figures for the preceding year being 9·73 and 1·31 respectively. The only appeal filed in the Political Agent's Court was still pending at the close of the year. Thirteen convicts and 20 persons under remand were imprisoned in the only jail. At the end of the year there were 3 convicts and 1 prisoner under remand in the jail. In the Diwan's Court 26 suits were decided and one was pending at the close of the year. The average duration from date of institution to date of disposal and the average duration of trials rose from 53·15 and 1·80 days to 73·69 and 2·15 days respectively, mainly on account of 1 suit which was pending for 1,067 days before disposal. The only appeal made to the Political Agent's Court was decided. The number of documents registered rose by 21 to 83, and the aggregate value of the property to which registered documents related advanced from Rs. 7,616 to Rs. 17,329.

Jails.

Civil Justice.

Registration.

Production and Distribution. Weather and crops. Forests.

332. The registered rainfall,—28·26 inches,—was 1·82 inches more than in the previous year and was sufficient. The supply of water in wells was, however, deficient. The extent of land held in inam and other tenures rose by 94 acres to 9,102 acres, of which 8,541 acres were cultivated. Prices of food-grains were lower than in the previous year. Of the total area of 87,000 acres of forest, 40,000 acres are leased to the British Government for Rs. 10,000 per annum. The revenue derived from the remainder amounted to Rs. 4,883. Considerable areas of forest were burnt, the fires being in many instances due to incendiarism. The expenditure on public works amounted to Rs. 2,714. All the works were completed except the improvements to the Raja's house.

Public Works.

Revenue and Finance. Gross Revenue. Loans.

333. The gross current revenue (excluding the opening balance) was Rs. 55,010. The gross expenditure amounted to Rs. 46,393. The closing balance was Rs. 28,524. During the year Rs. 100 were advanced for house-building, the rate of interest being one pie a rupee per mensem. Of the total amount of loans up to the end of the year (Rs. 210) Rs. 177 were recovered during the year.

Vital Statistics, etc. Births and deaths. Medical relief.

334. The numbers of births and deaths registered were 362 (32·3 per mille) and 294 (26·2 per mille). The public health was, on the whole, good. No case of plague occurred in the State although it was prevalent in the surrounding districts. The number of patients admitted to the dispensary rose by 2,584 to 12,478; the average daily number of patients advanced from 69·20 to 96·13. The hospital assistant performed 289 surgical operations. The midwife attended 170 cases of labour. During the year 540 persons were vaccinated, and 528 operations were successful.

Education.

335. The number of pupils on the rolls of the Jubilee lower secondary school rose from 160 to 168 and the average daily attendance rose from 110·54 to 147·98. Of the 13 boys presented for the primary examination, 11 boys passed and of 7 boys who appeared for the lower secondary examination 2 boys passed. The cost of the school was Rs. 1,385 and the school fees amounted to Rs. 688, the cost and school fees in the preceding year being Rs. 1,377 and Rs. 507 respectively. The strength of the London Mission girls' school rose from 52 to 63.

CONDITION OF THE PEOPLE. (1901–1902.)

336. The year 1901–1902 was marked by the existence of scarcity and by high prices. The rains of the south-west monsoon were deficient in portions of the Presidency. This, coupled with the failure of the north-east monsoon of the preceding year, caused distress in portions of Cuddapah, Anantapur, Chingleput and North Arcot and necessitated the opening of relief works on a small scale. The prices of the principal food-grains were much above the average prices of the preceding ten years. A fall set in after the close of the south-west monsoon, and at the end of the year the prices were generally lower than at the beginning. The

average annual prices, however, continued to be high, rice, second sort, being 29 per cent. above the average, and the dry grains 37 to 44 per cent. above the average. According to the recent census of 1901, the total population of the Presidency was 38,199,162, showing an increase of 2,568,722 or 7·2 per cent. as compared with the census of 1891. The increase was fairly general, but in Tanjore, Cuddapah, Nellore and North Arcot districts, the rate of increase was below the average, being 0·8, 1·5, 2·3 and 4·4 per cent. respectively. In Tanjore, which is the most densely populated district in the Presidency, this result is mainly attributed to emigration to the Straits Settlements, Ceylon and Burmah, and in the other districts to a succession of unfavourable seasons. In North Arcot another cause which contributed in some degree to the low rate of increase, was emigration to the Kolar gold mines in Mysore, where there is a large and steady demand for labour and high wages are offered. The statistics of occupation compiled at the recent census show that excluding the Agency tracts, 71 per cent. of the people depend for their subsistence on agriculture, and 17 per cent. on industries including petty trading; 3·3 per cent. are engaged in Government service or the learned professions, 2·9 per cent. in personal service and 2·2 per cent. in commerce or trade. The remainder either are unskilled non-agricultural labourers or have indefinite occupations. The average monthly rates of wages for the Presidency show no great variation as compared with the previous year. During the year the wages of horse-keepers, common masons, carpenters and blacksmiths in towns were Rs. 6–10–0, Rs. 15–2–0, Rs. 15–7–0 and Rs. 15–9–0 per mensem. In the rural tracts these labourers earned Rs. 5–7–0, Rs. 13–10–0, Rs. 13–11–0, and Rs. 13–4–0 respectively. The rate of wages of agricultural labourers was Rs. 4–14–0. It is generally believed that the indebtedness of agriculturists as measured in money, has increased of late years owing to the great facilities of borrowing; but in this Presidency, the bulk of the lenders are themselves agriculturists, and the bulk of the land alienated by sale or mortgage appears to pass only from the poorer to the more prosperous agriculturist.

MISCELLANEOUS.

337. The amount paid to Arcot, Carnatic, Jaghirdar and Yeomiahdar stipendiaries fell from Rs. 3,85,346 in 1900–1901 to Rs. 3,74,980, and the number of stipendiaries declined from 580 to 521. Forty-one stipendiaries died during the year and fifty-one stipends having an aggregate of Rs. 194 a month were commuted for Rs. 23,659. Thirty-seven new stipends were granted during the year. **Political pensions.**

CHAPTER II.

ADMINISTRATION OF THE LAND.

REALIZATION OF REVENUE.

(FASLI 1310—1ST JULY 1900 TO 30TH JUNE 1901.)

Peshkash. 1. The total current demand of peshkash payable on permanently-settled estates during the fasli was Rs. 50,06,113, while it was Rs. 49,94,873 in fasli 1309; the increase was mainly due to the enhancement of the peshkash payable for the Kotapad pargana of Vizagapatam district by Rs. 9,377. The arrears of peshkash due at the beginning of the year were Rs. 3,35,975. On account of the current demand Rs. 47,17,955 were collected and on account of arrears Rs. 1,85,062; the total arrears at the close of the year were therefore Rs. 4,39,071.

Shrotriyam-jodi. 2. The quit-rents payable to Government on villages held on shrotriyam or other favourable tenures amounted to Rs. 7,40,255 and was Rs. 2,998 less than in fasli 1309; the decrease was due to the transfer to "ryotwar and miscellaneous" of Rs. 4,084, the quit-rents on certain minor inams erroneously included under shrotriyam-jodi in previous years. The arrears due at the beginning of the year amounted to Rs. 37,729. The amounts of the current demand and of the arrears which were collected during the fasli were Rs. 7,16,172 and Rs. 36,479 respectively; Rs. 12, which were arrears, were remitted; the uncollected balance at the close of the year was therefore Rs. 25,321.

Ryotwar and miscellaneous. 3. The current demand under "ryotwar and miscellaneous" was Rs. 5,16,59,223. As the corresponding demand in fasli 1309 was Rs. 4,90,83,282, there was a large increase in the demand amounting to Rs. 25,75,941. The total ryotwar holdings rose by 111,306 acres to 22,609,173 acres and the assessment on them increased by Rs. 2,61,035 to Rs. 4,48,07,999; the increase of assessment in Malabar was Rs. 85,000 and was due to the introduction of new rates of assessment in portions of the district; in Kistna there was an increase of more than half a lakh of rupees, which was due to the favourable character of the season and to the fact that a large extent of land irrigable under the Iskapalle project in Tenali taluk was sold during the year; the increase in Madura includes a sum of Rs. 8,410 which represents the enhanced assessment imposed on lands to which irrigation under the Periyár dam was extended during the year; elsewhere the extension of cultivation

Water-rate. was due to the favourable character of the season. The revenue derived from water-rate and charges for the irrigation of second crops amounted to Rs. 10·37 lakhs and Rs. 9·90 lakhs respectively, the total being Rs. 2·23 lakhs more than in fasli 1309; more than two-thirds of the increase in the water-rate was contributed by the two districts of Gódávari and Kistna and is attributed to the favourable season; increments of revenue in other districts are ascribed to similar causes, and in Madura the increase was due to the extension of irrigation under the Periyár dam. The increase in the revenue derived from charges for the irrigation of second crops is ascribed to the unusually plentiful supply in the sources of irriga-

Remissions. tion. The amount of fixed remissions and other deductions not dependent on the season declined from Rs. 3,15,852 in fasli 1309 to Rs. 2,43,887, the fall being mainly due to a decrease of Rs. 94,308 in the remission allowed on the gradual introduction of new rates of assessment. There was a marked decline, amounting to Rs. 15,86,092, in occasional remissions or remissions granted with reference to the state of the season, which in fasli 1309 they were Rs. 29,59,314 and in fasli 1310 were Rs. 13,73,222;

they were, however, Rs. 8·93 lakhs more than in fasli 1308; the decrease is mainly attributed to the favourable character of the season; remissions on account of shavi or poor crop fell by Rs. 7,85,135 and those on account of land left waste fell by Rs. 5,85,768. Miscellaneous revenue, *i.e.*, quit-rent and water-tax on minor inams and revenue derived from cultivated lands for which no pattas were issued and from certain other minor sources, advanced from Rs. 68,74,595 in fasli 1309 to Rs. 72,69,813, the net increase being Rs. 3,95,218; there was a rise of Rs. 1·88 lakhs in the charges for water in zamindari and inam villages and the water-rate on minor inams increased by Rs. 1·05 lakhs. These facts account for the increase of Rs. 25·76 lakhs in the current demand under "ryotwari and miscellaneous." The current demand of cesses payable with the land-revenue under this head was Rs. 65,85,675 and the arrears of land-revenue and cesses at the beginning of the fasli amounted to Rs. 37,84,922. Remissions of arrears to the extent of Rs. 96,062 and remissions of amounts included in the current demand to the extent of Rs. 453 were granted and Rs. 35,44,977 of the arrears and Rs. 6,03,79,401 of the amount included in the current demand were collected; the total balance of land-revenue due at the close of the fasli under "ryotwar and miscellaneous" was therefore Rs. 16,50,417.

Total land-revenue.

4. The total current demand under land-revenue and cesses amounted to Rs. 6,52,99,814, of which Rs. 6,34,15,812 were collected within the fasli and Rs. 453 written off the accounts, leaving a balance of Rs. 18,83,549 (2·9 per cent. of the amount to be collected) at the close of the year. This was a distinct improvement on the results of the previous year when 6·4 per cent. of the demand was left unrealized at the end of the year. The balance of arrears at the beginning of the year was Rs. 42,92,699, of which Rs. 39,68,925 were either collected or written off. The total uncollected balance at the close of the year was Rs. 22,07,323.

Coercive processes.

5. The number of demand-notices issued was 6,515,815, *i.e.*, 381,573 more than in fasli 1309; the increase was most marked in North Arcot (192,125), Coimbatore (106,535) and Cuddapah (76,851). The advance was generally due to the heavy arrears outstanding at the beginning of the year owing to the unfavourable character of the season in fasli 1309. Demand-notices are merely formal intimations of the amount of assessment due, and the consequences of failure to pay. The number of cases in which property was attached rose from 406,246 in fasli 1309 to 488,380; the largest increases occurred in North Arcot (51,863), Chingleput (26,192) and Cuddapah (15,262). Personal property was distrained in 6·2 per cent. of the cases in which demand-notices were issued and real property was attached in 1·3 per cent. Though the number of defaulters whose personal property was distrained was 405,120, the number of cases in which such property was brought to sale was only 8,796; the number of defaulters whose real property was attached was 83,260, but real property was sold in only 14,760 cases; these facts indicate that the majority of the distraints and attachments were nominal or were permitted by the defaulters in order to gain time; in 32·4 per cent. of the cases the arrears were paid before the sale-notices were issued. Out of 329,926 cases in which sale-notices were issued, sales were actually held in only 23,556 cases, *i.e.*, in 7·14 per cent. of the total number. There were 5,951 more sales than in fasli 1309; the districts which contributed to this increase most materially were Cuddapah (2,635), North Arcot (2,183) and Kistna (1,486). In Cuddapah and North Arcot the arrears at the beginning of the year were between five and six lakhs of rupees and the revenue realized during the year in each case exceeded the collections of the previous year by Rs. 4·7 lakhs and Rs. 3·7 lakhs respectively; these circumstances together with the comparatively unfavourable nature of the season sufficiently account for the increased resort to actual sales. In Kistna a general explanation is similarly to be found in the facts that the arrears at the beginning of the year were nearly five lakhs and that the gross collections of the year exceeded the current demand by Rs. 4·3 lakhs and the amount realized in the previous year by Rs. 12·35 lakhs. Taking the Presidency as a whole, an abnormally large amount of arrears had to be collected in addition to the current demand which, mainly on account of the more favourable season, was higher than in fasli 1309. An unusually large proportion of the arrears and a high percentage of the current demand were however realized during the year.

Financial.

6. The cost of district-administration including the pay and travelling allowances of revenue inspectors amounted to Rs. 45,01,310 during the official year 1901–1902 and was Rs. 12,817 less than in the previous year. There was a decrease of Rs. 41,312 in the fees paid for searches in registry-offices under sub-divisional establishment as the expenditure on such fees was abnormally large in 1900–1901, when loans were extensively granted under the Land Improvement and Agriculturists' Loans Acts in Kurnool district, involving numerous searches in the registry-offices in order to ascertain whether the lands offered as security were free from encumbrances. A decrease of Rs. 27,698 in the cost of temporary establishment under sub-divisional establishment was due to the transfer of the expenditure on account of the establishment employed for the registration of janman titles in Malabar to "survey and settlement." There was an increase of Rs. 20,572 in the expenditure on salaries of officers under general establishment which is attributed to the absence of a larger number of officers on privilege leave during 1901–1902 than in the previous year. The increase of Rs. 9,237 in law charges was due to the payment of costs decreed against Government in connection with the lanka village-cess suits in Gódávari district. The administration charges on account of the Board of Revenue (Land Revenue) fell by 1·10 per cent. from Rs. 1,72,373 to Rs. 1,70,474.

SURVEYS. (1901–1902.)

General.

7. The cadastral survey of ryotwari lands excluded from former surveys was continued in Chingleput, North Arcot, Salem and Coimbatore; the survey of 79 square miles (two square miles more than in the year 1900–1901) was completed. The area surveyed in the cadastral survey of proprietary estates in the districts of Vizagapatam, Bellary, Nellore, Salem and Madura was 462 square miles, while the corresponding area in the previous year was 457 square miles together with 12 square miles over which the survey was revised. In Kistna, Kurnool and Nellore the outturn of the cadastral resurvey of ryotwari lands prior to resettlement was 1,384 square miles in addition to 133 square miles, the resurvey of which was revised; the corresponding figures in the previous year were 1,541 and 188. The block-survey of whole inam-villages for the district boards of Ganjám, Nellore and Trichinopoly was completed over 157 square miles, but in the year 1900–1901 the block-survey of 333 square miles was done.

Ganjám.

8. The block-survey of 29 whole inam-villages of the Dhárákóta and Kurla estates was sanctioned in 1901, of which the survey was not begun until March 1902; during the year two square miles were surveyed.

Vizagapatam.

9. The cadastral survey of 345 square miles of the Vizianagram zamindari and of one square mile of the Pedda Merángi estate was completed during the year. The cadastral survey of the Vizianagram zamindari began in August 1899; the area surveyed up to end of 1901–1902 was 803 square miles; the average cost of surveying a square mile will probably be Rs. 182.

Gódávari.

10. The survey of the Gódávari coast-line from Tirtalamoodi to Chollangi ordered in February 1900 was completed during the year, and a map, showing the area reclaimed from the sea since the publication of the atlas sheet in 1842, was furnished to the Collector.

Kistna.

11. The cadastral resurvey of 529 square miles or 29 square miles more than the forecast was completed during the year in the taluks of Sattenapalle, Narasaraopet, Palnad and Vinukonda. The resurvey of Kistna district began in 1892; up to the end of 1901–1902, 5,155 square miles were completed, leaving a balance of 101 square miles; it is estimated that the cost of the resurvey will be Rs. 77 a square mile.

Kurnool.

12. The cadastral resurvey of 107 square miles in Nandikotkur taluk and 82 square miles in Nandyal taluk was completed during the year. In Nandikotkur, the resurvey of 41 square miles measured prior to September 1899 was revised in accordance with the orders of the Board of Revenue, and the number of 53

square miles measured prior to 1st April 1901, was also revised as the quality of the survey was found when inspected in the field or plotted in office to be indifferent or bad. The forecast was 500 square miles, but this was not realized owing partly to the difficulty in obtaining surveyors. The resurvey of Kurnool district began in 1896. Up to 1st April 1902, 1,570 square miles were completed; it is estimated that the resurvey of each square mile will cost Rs. 99 on the average.

13. The theodolite-survey of Sandúr State was completed during the year, and 3 square miles were cadastrally surveyed. It was estimated at the beginning of the year that the survey of the whole of Sandúr State would be completed during the year, but the estimate was not realised as most of the surveyors of the party had to be employed in Nellore district. **Sandúr State.**

14. The cadastral resurvey of 189 square miles of Nellore taluk and 103 square miles of Atmakur taluk and the block-survey of 6 square miles of whole inam-villages were completed during the year by the Nellore Resurvey Party No I. The outturn realised was only about two-thirds of the forecast. Of the area measured during 1900–1901 39 square miles were completely revised during the year. The 353 square miles returned as the outturn for 1900–1901 include about 25 square miles which were either not measured or for which records are not forthcoming. The resurvey of 373 square miles was completed by the Nellore Resurvey Party No. II during the year, 191 square miles in Gudur taluk and 182 square miles in Rapur taluk. The initial cadastral survey of 19 out of 36 square miles of the Manabolu division of the Venkatagiri zamindari was also completed. The unhealthiness of the southern and eastern portions of Gudur taluk, which constitute the Sríharikóta firka, where a considerable portion of this year's work lay, and the small size of the fields to be measured therein were the chief causes of short outturn. The resurvey of Nellore district began in 1900, and two parties were employed. The total outturn of the two parties up to 31st March 1902 was 1,344 square miles. The estimated average cost of the resurvey of a square mile is Rs. 147. **Nellore.**

15. The revised survey of half a square mile was completed in the Covelong salt-factory. The survey of the remaining area of this factory as also that of other factories in Chingleput and South Arcot districts was stopped as the salt-pans were under water. **Chingleput.**

16. The survey of a quarter square mile which remained incomplete in the Porto Novo union at the beginning of the year was completed during the year. **South Arcot.**

17. Three resumed inam-villages—area 2 square miles—in Chittoor taluk of North Arcot district were surveyed during the year. The survey of scattered patches of cultivation on the Javadis was sanctioned in October 1901. The outer boundaries of the blocks were demarcated by the Forest department and out of 92 blocks, 42 blocks, having a gross area of 36 square miles, were surveyed during the year. **North Arcot.**

18. The forecast in Salem was the cadastral survey of 155 square miles in the Berikai estate, Bágalúr palayapat, Karubale shrotriyam and Billanakuppam mitta, and in the hill villages of Atur and Námakkal taluks. The outturn realised was 105 square miles, of which 90 square miles were in the estates mentioned above, 5 square miles in the Salem mitta, the survey of which was ordered after the forecast was submitted to Government, and 10 square miles in Atur and Námakkal taluks. The forecast was not realised as many surveyors deserted owing to the prevalence of plague in Hosúr taluk, in which the estates of Berikai and Bágalúr are situated. **Salem.**

19. The survey of 31 square miles of scattered patches of cultivation in Kollegal taluk in Coimbatore district was completed. In this district, it was not hitherto possible to find out with any approach to accuracy the total area to be surveyed in villages excluded from the original cadastral survey and the area of large waste blocks to be sub-divided in villages already cadastrally surveyed. Steps have been taken to obtain this information. **Coimbatore.**

Trichinopoly.

20. The block-survey of 149 square miles of whole inam-villages in Trichinopoly district was completed during the year and the area still remaining to be surveyed was reported to be 101 square miles including 30 square miles in the Kadavur and Marungapuri zamindaris, the classification of which was sanctioned in November 1901.

Tanjore.

21. The survey of Kottapatam port limits, 8 acres in extent, in Tanjore district was completed during the year.

Madura.

22. It was estimated at the beginning of the year that the area remaining for survey in Madura district was 13 square miles in the Rámésvaram devastanam villages and 6 square miles in the Dévakóttai sub-division. The area actually surveyed during the year was $6\frac{1}{2}$ square miles in the former and 9 square miles in the latter, and the balance at the end of the year was only half a square mile in the Rámésvaram devastanam villages. The demarcation and theodolite-survey of the boundary of the Sayalgudi forest, the estimated area of which is 120 square miles, and the cadastral survey of Kakkur village belonging to Travancore State, but situated within the Ramnad zamindari were ordered in May 1901. Progress in these surveys was retarded owing to the difficulty of obtaining the stones required for demarcation and also on account of opposition to the survey on the part of the tenants.

Malabar.

23. Several miscellaneous items of work necessitated the continuance of a small section of the Malabar Janmam Registration survey party during the year; the section was disbanded in March 1902.

South Canara.

24. In South Canara district 63,145 sub-divisions were measured during the year in Kasaragod, Mangalore and Coondapoor taluks.

Municipalities.

25. The postponement of surveys of all municipal towns except those which were well advanced at the end of 1900–1901 was ordered in July 1901. A small establishment was employed in finishing maps and preparing fair records of Coimbatore, Cuddalore and Negapatam towns, the survey of which had been completed by 1st April 1901; the area completed was 10·67 square miles. Up to the end of the year the special cadastral survey of lands within 28 municipal towns, having a total area of 154 square miles, was completed at a cost of Rs. 4,34,559; the average cost was therefore Rs. 2,822 a square mile.

Banganapalle State.

26. At the request of the Darbar the theodolite-survey of Banganapalle State was undertaken during the year and 171 square miles were completed up to the end of the year. The cost of survey, including that of theodolite-stations and of field-boundary-marks provided in advance of the field-survey, was Rs. 9,283.

Maps.

27. The area of village-maps printed during the year was 1,408 square miles All the maps received from the field were printed, except those of 323 square miles, which were awaiting final examination in the central office. The arrears represent less than a month's work for the presses. The outturn of the photo-zincographic office included 211,363 copies and 111,285 pulls of zincographs and 127,401 photo prints, the corresponding numbers in 1900–1901 were 267,585, 132,763 and 140,366. The total cost of the central office including the pay of the Superintendent was Rs. 98,816.

District surveyors.

28. In Malabar a district surveyor was appointed in November, as by that time the survey work in the district had been almost completed and the survey establishments disbanded. He completed the training in survey of the Menons of all the taluks of Malabar excepting Kurumbranád and Chirakkal. In the other districts, the district surveyors were chiefly engaged in training karnams and candidates for the post of Revenue Inspector in survey, in examining the karnams' field-measurement books and inspecting their work in connection with the measurement of sub-divisions and the examination of boundary-marks and in attending to the work of demarcation and sub-division connected with intricate boundary-disputes and other cases specially referred to them by Collectors, such as could not be attended to by the Revenue Inspectors.

Boundary and field marks.

29. The total number of recorded boundary-marks in the Presidency at the beginning of the year was 33,448,559, including 1,674,579, theodolite-stations, 3,119,216 offsets and 28,654,764 field-marks; of these 39,779 theodolite-stations,

107,234 offsets and 1,660,939 field-marks were reported to be missing or out of repair at the beginning of the year; during the year 2,900 theodolite-stations, 24,399 offsets and 473,693 field-marks were replaced or repaired. These figures do not include those for Vinukonda and Palnad taluks of Kistna district, Gudur and Nellore taluks of Nellore district, and Nandikotkur and Nandyal taluks of Kurnool district, where resurvey and redemarcation were carried on during the fasli. The progress made in the replacement and repair of theodolite-stations was small. In the replacement of boundary-offsets also very little progress was made during the year in several districts; the balance still missing was large in Ganjám, Gódávari, Nellore, Cuddapah, Kurnool, Madura, and Coimbatore. In the replacement of field-marks also the progress (18 per cent.) was less than in the previous year (24 per cent.), whilst there was a small improvement under "repairs." About two-thirds of the stones replaced appertained to North Arcot, Madura, Tinnevelly and Coimbatore, while about 80 per cent. of the stones were repaired in North Arcot, Tanjore, Madura, Coimbatore and South Arcot. The work cannot progress satisfactorily until the field measurement books are completely written up. No progress in this direction was made in Nellore as the records were handed over to the Survey department in connection with the resurvey of the district and in the Nilgiris, as the karnams were engaged in the census and other urgent work. The balance of field measurement books to be completed was large in every district except Chingleput, South Arcot, Trichinopoly, Tinnevelly, Coimbatore and Salem, while the progress in the measurement and plotting of sub-divisions was very slow except in Vizagapatam, Trichinopoly and Salem. The number of villages for which field measurement books were not completed was 1,431 in North Arcot and 888 in Ganjám; the number of sub-divisions to be measured at the end of the fasli was 734,365 in Tinnevelly, 534,620 in Chingleput and 422,432 in Cuddapah; there remained 735,907 measurements to be plotted in Tinnevelly, 535,142 in Chingleput and 511,883 in North Arcot.

The Training of Revenue officers.

30. Nine Assistant Collectors and one Deputy Collector were instructed in surveying during the year as well as 27 Revenue Inspectors, 16 clerks, 26 amins, 9 samadhars and 2 Madras karnams. No regular survey-schools for karnams were held during the year. The means by which the training of karnams in surveying should in future be provided for are under discussion.

Financial.

31. The gross expenditure on the Survey department during the year amounted to Rs. 6,14,928, of which Rs. 3,90,324 were chargeable to Government, Rs. 2,08,358 were recoverable from proprietary estates, Rs. 13,461 from the janmis of Malabar and Rs. 2,785 from the districts of Nellore and Trichinopoly. Deducting from this total Rs. 2,53,463 recovered from proprietors of estates and the Malabar janmis, the net expenditure during the year was Rs. 3,61,465. Including the cost of the central office, the total cost of the department up to the 31st March 1902 was Rs. 2,52,14,760, of which Rs. 1,46,01,207 were spent on cadastral field survey and Rs. 23,63,469 on topographical survey. The average cost of the cadastral survey of a square mile has been Rs. 94 for demarcation and Rs. 186 for field survey; the average cost of the cadastral resurvey has been Rs. 89 a square mile; that of the special cadastral survey of lands within municipal limits has been Rs. 3,639 a square mile and the topographical survey of a square mile has cost Rs. 41 on the average; these figures include an estimated share in the cost of the central office. Of the total area of the Presidency (141,529 square miles) 78,698 square miles have been cadastrally surveyed.

SETTLEMENTS. (1901-1902.)

Parties.

32. Four Revenue Settlement parties were at work during the year—Party No. II in South Canara, Parties Nos. III and V in Gódávari and Kistna, and Party No. VI in Malabar. A portion of Party No. V worked in Nellore and Trichinopoly districts also.

Gódávari. Initial settlement. Resettlement.

33. The resumed inam-lands in 47 villages of Gódávari district were classified during the year; the area classified was 1,158 acres. The introduction of the revised rates had been completed throughout the district before the commencement of the year under report. Branch settlement-offices were opened at the head-quarters of all taluks, and with the aid of the karnams the resettlement diglott registers of all the villages were written up. The checking of these registers and of the memoirs and eye-sketches were in progress. The number of objection-petitions with reference to rough pattas disposed of during the year was 2,475.

Kistna. Resettlement.

34. The work done in connection with the resettlement of the Masulipatam portion of Kistna district was similar to that done in Gódávari district; the number of objection-petitions disposed of was 346. The reclassification of soils in the delta taluks of the Guntúr portion of the district was commenced in February 1902. By the close of the year under report reclassification was completed in 46 villages, the total area reclassified being 114,760 acres or about 180 square miles. The measurement of interstitial holdings was commenced in March 1902 and completed in 15 villages, the number of sub-divisions measured being 8,766.

Bellary and Anantapur. Initial settlement.

35. Errata-lists were prepared and submitted to the Board with reference to the sub-divisions made in service inams subsequent to the last settlement in Bellary and Anantapur districts; objection-statements on settlement registers received from the Board's office and references from Collectors regarding those registers and inam excess accounts were answered; settlement registers for the six sub-divided villages in Hindupur and Madakasíra taluks were prepared afresh and submitted to the Board to be printed.

Nellore. Classification for cesses.

36. A whole inam-village in Ongole taluk of Nellore district, which had escaped classification along with the other whole inam-villages in the district, was classified during the year. The area dealt with was 533 acres.

Trichinopoly. Classification for cesses. Resettlement.

37. The number of whole inam-villages classified in Trichinopoly district was 154 during the year under report: the area classified was 140,065 acres or about 219 square miles. The tabulation of figures for the report on the result of classification was in progress at the close of the year. Resettlement registers were re-checked; errata-lists were issued; and references from Revenue officers and objection-statements from the Board were answered.

Tanjore. Initial settlement.

38. In Tanjore district areas appertaining to more than one inam title-deed, but included under the same survey-number, were apportioned among the several title-deeds; inam-excess accounts were revised in accordance with the above apportionment and the necessary errata-lists were prepared; and objection-statements from the Board and references from officers of the Revenue department were answered.

Malabar. Initial settlement.

39. Four complete desams and portions of two desams of Calicut taluk in Malabar district, which had not been surveyed at the time of the original classification of the taluk, and records of the survey of which were subsequently received, were classified during the year; the area classified was 27,167 acres or about $42\frac{1}{2}$ square miles. The registration of janman titles was completed in Calicut and Kurumbranád taluks. The issue of rough pattas and the hearing of objections were completed in the whole of Walavanad, Kurumbranád and Calicut taluks. The revised rates were introduced in the whole of Walavanad and Kurumbranád taluk as well as in the 94 desams of Calicut taluk which had been left over at the close of the previous year. Field-inspection with reference to objections was carried out in 62 desams of Palghat taluk, which had stood over at the close of the previous year, and also in 282 desams of Walavanad and 294 desams of Kurumbranád taluk. Fair accounts were prepared and furnished to the Tahsildars for the whole of Palghat and Calicut taluks and for 56 desams of Walavanad and 189 desams of Kurumbranád taluks. Diglott registers were prepared for all the desams of Calicut and 114 desams of Palghat taluks.

South Canara. Initial settlement.

40. The revision of the survey of the six villages constituting the Mangalore municipality in South Canara by the Survey department necessitated the revision of the classification of soils and of tree-counting in those villages. This was done in the year under report. The area reclassified was 2,572 acres and the number of

trees recounted was 130,285. The adjustment of discrepancies between the classification-registers and the revised survey-records was completed in 302 villages. Fasli changes in the records were carried out in 102 villages of Mangalore taluk. Sub-divisions were completely measured in 27 villages, so far as surveyors alone were concerned, and in 214 villages of Mangalore taluk by classifiers as well as by surveyors.

Miscellaneous.

41. At the commencement of the year the manuscript settlement-registers of 653 villages were on hand. During the year the registers of 3 villages were received. Out of the total number (656) the registers of 246 villages were printed during the year, leaving a balance of 410 registers of which 406 related to Trichinopoly district and 4 to Anantapur district. The slow progress made in the printing of registers was due to the necessity of rectifying a large number of errors in the Trichinopoly registers. At the beginning of the year there were 1,484 maps to be mounted. Up to the month of August 1901, 298 maps were received, raising the total number to be mounted to 1,782. Of these, 1,545 were mounted in the office of the Board of Revenue between April and August 1901. The work was then transferred to the Survey office and the remaining 237 maps were sent to that office to be mounted. Between August 1901 and the close of the official year, 642 maps were mounted in the Survey office.

Financial.

42. The total expenditure during the year amounted to Rs. 3,70,663, the bulk of which (Rs. 1,71,417) was spent in the original settlement of Malabar district. Rs. 60,385 were expended on the original settlement in South Canara and Rs. 72,511, Rs. 24,974 and Rs. 21,834 on the completion of resettlement of the districts of Gódávari, Kistna (Masulipatam portion) and Trichinopoly respectively. Up to 31st March 1902 the total cost of the Settlement department was Rs. 1,31,97,158, of which Rs. 1,25,11,765 represent the amount spent on original settlement. The annual demand of land-revenue has increased by 21 per cent. from Rs. 3,66,37,745 before the introduction of settlement to Rs. 4,44,41,670. The settlements of Malabar, South Canara and the hill villages of Salem district are incomplete, and those of Madras, and of the hill villages of Coimbatore and North Arcot districts are still to be undertaken.

Inam Commission.

43. No inams were brought under settlement during the year under report by any establishment specially entertained for the purpose. The number of title-deeds issued during the year was 559; of these 526 related to personal inams. The jodi already payable to Government on these inams was Rs. 21, but the aggregate quit-rent newly imposed and payable to Government amounted to Rs. 597, including Rs. 324 on personal inams and Rs. 292 on village-service inams. The cost of the establishment was Rs. 6,424. The total number of title-deeds issued by the Inam Commissioner from the commencement of the operations up to the end of the year 1901–1902 amounted to 494,263, covering an extent of 7,391,298 acres, assessed at a little over 115 lakhs of rupees. The yearly increase of revenue secured by the enfranchisement of inams was Rs. 25,37,632, including Rs. 3,85,928, the assessment on inams fully assessed. Adding to the former figure the old jodi payable to Government amounting to Rs. 10,23,984, the total revenue derivable from the inams settled up to the close of the year was Rs. 35,61,616.

LAND RECORDS. (1901–1902.)

44. A detailed examination of the village and taluk accounts was made as usual at the annual settlement by Collectors and Divisional officers in all districts. The result shows that the accounts were fairly well kept on the whole. The village accounts in Palkonda taluk of Vizagapatam district were very carelessly maintained, and the Collector reported that steps were taken by him to remedy this defect. The defects previously noticed regarding the permanent B register do not appear to have been remedied as yet in several districts, especially in the Circars, Kurnool and Chingleput. In Ganjám several errors were noticed in the village permanent register A. The special register of wells was not maintained in some

villages in Kurnool and was not properly maintained and checked by actual inspection by karnams, Tahsildars and Divisional officers in several other districts; but every endeavour is being made to secure both accuracy and completeness in the preparation of these accounts. As regards taluk accounts there is also room for improvement, especially in North Arcot. In Chingleput there was an unusual delay in the disposal of darkhast and transfer cases. Revised forms of village and taluk accounts have been ordered to be introduced in Malabar district and it is hoped that they will be introduced into the settled taluks of the district in fasli 1312. The village statistical registers and firka books were also examined during the fasli and necessary instructions were issued for their correct maintenance and early completion. The statistics received show that these registers have been completely or nearly completely written up and checked up to fasli 1309 in all districts, but in Cuddapah, firka books have to be prepared and checked for 90 villages, and in Kurnool, 118 firka books have to be checked. The progress for fasli 1310 was generally satisfactory. The registers have been completely prepared and checked in Vizagapatam, Trichinopoly, Coimbatore, Salem and the Nilgiris. Considerable progress was made in the other districts generally in the preparation of village registers and firka books, but the progress in the checking of these registers was small in several districts.

WASTE LANDS.

(FASLI 1310—1ST JULY 1900 TO 30TH JUNE 1901.)

45. The area not available for cultivation was reduced during the year by 542 square miles to 19,748 square miles; the largest areas not available for cultivation were in Cuddapah (2,441 square miles), South Canara (1,839 square miles), Malabar (1,668 square miles), Kurnool (1,223 square miles), Nellore (1,213 square miles) and Gódávari 1,205 square miles). During the fasli 184 additional square miles became available for cultivation in Kistna and 118 square miles in Salem. The extent of unoccupied arable land which was left waste fell from 9,985 square miles to 9,780 square miles. In Malabar the area left waste rose by 136 square miles to 1,871 square miles. In Anantapur the area left waste was 1,282 square miles. In Gódávari and South Arcot the areas left waste diminished by 94 and 74 square miles respectively. There was a marked reduction in the area of occupied land which was left waste, the area being 10,831 square miles in fasli 1309 and 9,007 square miles in fasli 1310. In Kistna, where 770 square miles were left waste during the year, the decrease was 545 square miles; the reduction exceeded 100 square miles in Nellore (168 square miles), Tinnevelly (134 square miles), Tanjore (130 square miles), Anantapur (120 square miles) and Gódávari (114 square miles). The area rose in only two districts—Chingleput and the Nilgiris—in each of which the increase was only 4 square miles. Excluding land occupied without pattas, the area of "dry" holdings rose from 18,166,227 acres to 18,226,347 acres and the extent of "wet" holdings from 4,331,640 acres to 4,382,826 acres, the total increase in the aggregate area of holdings being 0·5 per cent. The increase occurred in all the districts except Vizagapatam, Nellore, Chingleput, North Arcot, Tinnevelly and the Nilgiris where there was a slight decrease. The increase is attributed chiefly to extension of cultivation due to the favourable season of the year, and to the inclusion under holdings of land shown under "Miscellaneous" in previous years, and partly also to the introduction of survey areas in Calicut and Palghát taluks of Malabar, in Bhaváni and Satyamangalam taluks of Coimbatore district, and in Hosúr and Krishnagiri taluks of Salem district. The increase was large in Bellary, Kurnool, Cuddapah, Kistna, South Arcot and Malabar. In Bellary it is attributed to a large extent of land being taken on darkhast during the year in consequence of the extension to all taluks of the rule under which ryots are allowed to occupy the lands darkhasted for at the close of the fasli, though they are charged for the lands from the following year only. In Kurnool and South Arcot it is attributed to the favourable season for early crops. Notwithstanding a large increase due to the introduction of survey areas into the

taluks of Palghát and Calicut (viz., acres 67,154), the net increase in Malabar amounted to only 18,730 acres. This was due to a large relinquishment of dry lands to the extent of 47,098 acres due partly to the unfavourable character of the season at the time of sowing and partly to relinquishment of coffee estates. The decrease in North Arcot was due to the unfavourable season, and that in Nellore to the fact that a larger extent of land was relinquished than darkhasted for. Compared with fasli 1285, the year which preceded the great famine of 1876–78, the area under holdings exhibits an advance of nearly 2·59 million acres or 12·93 per cent. This increase was contributed by all the districts in the Presidency. If the area of cultivation shown under "Miscellaneous" is included, the increase rises to 3·17 million acres or 15·59 per cent. Of this increase, however, 1·23 million acres should be put down to the substitution of correct survey areas for the old survey areas, and to the inclusion of resumed inam lands under holdings. If these items be excluded, the net increase due mainly to extension of cultivation will amount to 1·94 million acres, and is shared by all districts except Kurnool. In the last-named district, the deficiency, which was reported to be 63,298 acres in the previous year, was reduced during the year to 25,641 acres; this deficiency was not due to any material extent to the reservation of large areas of arable lands for fuel and fodder reserves. Although over 166,000 acres out of areas proposed to be reserved have already been thrown open for occupation for cultivation, only a very small portion of such lands has been taken up, and that this shows that the main cause of the decrease in holdings, as compared with fasli 1285, seems rather to be the occurrence of unfavourable seasons at short intervals.

GOVERNMENT ESTATES.

46. There is nothing to be recorded under this head.

WARDS' ESTATES.

(FASLI 1310—1ST JULY 1900 TO 30TH JUNE 1901.)

[*Report on the Administration of Estates under the Court of Wards in the Madras Presidency for Fasli 1310.*]

Number of estates.

47. Including Parlákimedi, there were 39 estates under the management of the Court of Wards at the beginning of fasli 1310. Three of these were surrendered to their owners, while three other estates, viz., Belgam and Párvatípuram in Vizagapatam and Komáramangalam in Salem, were taken under management during the year owing to the minority of their present owners. There was thus, at the close of the year, the same number of estates under the Court's management as at the beginning. The Parlákimedi estate has been under management since 1830 on account of the imbecility of the ward. There were 38 other wards, of whom 34 were incapacitated by minority (two being females) and two by sex alone, while the estates of the remaining two (Kálahasti and Karvetnagar) were taken under management under Madras Act IV of 1899 owing to the embarrassed condition of the proprietors.

Estates restored to wards.

48. The three estates handed over were the small sub-divided zamindari of Tangellamúdi in Gódávári, the small proprietary estate of Mambarai in Madura, and Edamanal, a small ryotwari property in Tanjore. All the estates were under the Court's management for rather over eleven years. While the Tangellamúdi estate was under management, debts were paid to the extent of Rs. 32,000, over Rs. 23,000 were spent on works of improvement and a balance of nearly Rs. 70,000 was accumulated to meet claims under litigation. Debts to the extent of

Rs. 1,09,656 were paid off in the Edamanal estate, about Rs. 7,000 were invested in improving the property and a balance of Rs. 7,673 was handed over. In the Mambarai estate debts were paid off to the total amount of Rs. 22,527, Rs. 2,600 were spent on improvements and the estate was restored with a credit balance of Rs. 1,896. The current demand in the year of restoration was greater than that of the year when superintendence was assumed, by 27 per cent. in the case of the Mambarai estate, and by 30 per cent. in the case of that portion of the Tangellamúdi estate that remained under the Court's charge throughout the period of wardship. In the case of the Edamanal estate the current demand fell considerably.

Cultivation.

49. The extent of actual cultivation reported in the year was 581,568 acres or 78·9 per cent. of the holdings; in the preceding year, it was 338,981 acres or 79·9 per cent. The accounts in some estates are however inaccurate. In five estates the entire holdings are reported to have been actually cultivated. In eleven of the remaining estates the percentage of cultivation to holdings was more than 90, in thirteen others it was between 75 and 90, while in six estates it was below 75 per cent. In Kondamodalu (Gódávari) the percentage was only 24·3; this is attributed to the fact that agriculture is a secondary occupation with the tenants. In Karvetnagar the low percentage (58·2) is attributed to the incorrect registration of cultivation and to the disrepair of irrigation works.

Rent.

50. The gross current demand of rent and amount remitted rose from Rs. 23,87,511 and Rs. 29,882 in fasli 1309 to Rs. 30,74,904 and Rs. 39,091 respectively; the net demand therefore increased by Rs. 6,48,174. Of this amount Rs. 4,97,199 accrued in Karvetnagar (North Arcot), as several villages which were in the possession of usufructuary mortgagees were taken up under section 39 of Regulation V of 1804, as amended by Madras Act IV of 1899. An increase of Rs. 31,141 in Sivagiri (Tinnevelly) was ascribed to the favourable character of the season and the net demand in Kálahasti (North Arcot) rose by Rs. 24,896 on account of the increase in the outturn of land held on the grain-sharing system. The arrears of rent outstanding at the beginning of the fasli amounted to Rs. 17,80,285, of which Rs. 5,24,537 were collected and Rs. 89,023 were written off as irrecoverable during the year; Rs. 11,66,725 of these arrears remained to be collected at the close of the fasli; more than half of this amount was due in Kálahasti (North Arcot) where no regular settlement had been conducted for several years before the Court's assumption of management and in the scrutiny of the arrears fresh arrears to the extent of Rs. 2,41,027 were brought to light; the large arrears (Rs. 2,81,449) outstanding in Pithápuram (Gódávari) are ascribed to the poverty of the tenants. Of the current demand (Rs. 30,96,385), Rs. 22,36,756 were collected during the year; the balance at the end of the fasli was Rs. 8,59,627. In Kálahasti and Karvetnagar, where the balances were Rs. 2,79,083 and Rs. 2,69,375, the collections were retarded by the unfavourable character of the season and by other circumstances. In Pithápuram the balance was Rs. 1,14,650.

Season.

51. Except in the eight estates in which the rainfall was insufficient, untimely or ill-distributed and affected either the extent of cultivation or the outturn of crops or both, the season was on the whole favourable for agricultural operations. In Sálúru (Vizagapatam), the paddy crop was an almost total failure over the greater portion of the estate. In Pithápuram (Gódávari) various causes locally affected agricultural operations; in the early part of the year the rainfall was deficient and the supply in the Yeleru river was inadequate, while later on rain fell irregularly, heavy floods in the Gódávari caused some damage, and the crops in four of the six divisions composing the estate suffered injury from an insect-pest. The Gódávari floods also affected the crops in the Kondamodalu estate (Gódávari). In the Kálahasti estate (North Arcot) the tenants of the Pamur taluk suffered from a succession of adverse seasons and were emigrating from the taluk during the year under report; while in the Karvetnagar estate it was found necessary towards the close of the fasli to open at the cost of the estate test-works to afford relief to the poorer tenants.

Holdings.

52. The reported aggregate area of the holdings of the ordinary villages in all the estates (excluding rented villages) was 736,245 acres. The extents of holdings

in the estates which were under management in both years, were 711,949 acres in fasli 1310 and 416,470 acres in the previous fasli, showing an increase of 295,479 acres, which is the net result of an increase of 297,294 acres in thirteen estates, counterbalanced by a decrease of 1,815 acres in eight estates. There was an apparent increase of 161,609 acres in Kálahasti (North Arcot) which is said to be due to the fact that correct figures were not available in either year. The increase of 126,646 acres in Karvetnagar was due to the recovery of possession of many villages from usufructuary mortgagees under section 39 of Madras Regulation V of 1804.

Financial.

53. The aggregate cash receipts of all the estates under management during the year amounted to Rs. 34,20,106. Adding to this Rs. 5,95,692, the cash balance at the beginning of the year (excluding the amount at the credit of estates surrendered during the year), the total cash assets of the fasli amounted to Rs. 40,15,798, of which Rs. 34,54,449 (including a sum of Rs. 8,09,201 invested in Government promissory notes and Rs. 1,59,363 devoted to the repayment of debts) were expended during the year. The cash balance at the close of the fasli was thus Rs. 5,61,349. Adding to this the Government securities of the nominal value of Rs. 45,54,900 held on behalf of certain estates and the estimated value (Rs. 1,17,475) of grain on hand at the close of the year, the total balance to the credit of the estates on the 30th June 1901 was Rs. 52,33,724, showing an increase of Rs. 7,71,034 as compared with the opening balance of the year. Excluding debts recovered (Rs. 54,912), sale-proceeds of property (Rs. 1,64,153) and amounts borrowed (Rs. 20,600), the receipts amounted to Rs. 31,80,441 and excluding debts paid (Rs. 1,59,363) and amounts invested in Government securities (Rs. 8,09,201), the charges were Rs. 24,85,885; the corresponding receipts and net charges were Rs. 27,06,306 and Rs. 24,19,237 respectively in the preceding year.

Surplus funds.

54. The surplus balance exceeded Rs. 10,000 in 25 estates, but in some instances the money was required for payment of debts, peshkash, land-cess, &c. The largest balances were those at the credit of the Pedda Mérangi (Rs. 1,75,937), Kasimkóta (Rs. 1,62,515), Pithápuram (Rs. 12,73,362), Telaprole (Rs. 7,04,691), Sivagiri (Rs. 2,73,826) and Kavalpara (Rs. 1,07,516) estates. The survey of the Kasimkóta (Vizagapatam) estate was completed at a cost of Rs. 21,193 and a portion of the surplus was devoted to the improvement of irrigation works (Rs. 12,422) and the construction of a road opening out the estate (Rs. 5,910); an irrigation survey is in progress. In Pithápuram (Gódávari) a sum of Rs. 55,234 was spent during the year on irrigation works and buildings and about six lakhs were invested in Government securities. The negotiations for the purchase of the Paniyur mitta on behalf of the Sivagiri ward (Tinnevelly) were unsuccessful. The surplus funds of the Kavalpara estate are being invested in the purchase of Government promissory notes, as land yielding an adequate return is not available in the vicinity of the estate. Advances in money and grain to the aggregate value of Rs. 9,270 were granted during the year under report to tenants in ten estates for cultivation and other expenses.

Charges. Establishment.

55. Taking all the estates together, the percentage of establishment charges and Government commission to normal receipts was 12·4, while it was 11·8 in the preceding year. The aggregate advance is more than accounted for by the heavy expenditure on establishment required to reduce to order the involved estates of Karvetnagar and Kálahasti. The percentage exceeded 15 in sixteen estates, and it exceeded 20 in Karvetnagar (20·1), Sáptúr (21·8), Palaiyampatti (22·6), and Sivasamudram (25·6). The high percentages in the encumbered estates of Kálahasti and Karvetnagar (North Arcot) are attributable partly to the backward state of the collections and partly to the entertainment of temporary establishments for the settlement of claims, to initial contingent outlay and to the maintenance throughout the year of the Deputy Collector, who is in charge of the estate under the Act, with his establishment. In Sáptúr (Madura) the high ratio was due partly to the cost of an expensive forest establishment from which no immediate return can be expected, but mainly to the fact that the bulk of the grain collections were sold after the close of the year. The same cause accounts for the increase in Palaiyampatti (Madura) and part of that in the Sivasamudram (Coimbatore) estate.

Public works.

56. The total allotment for expenditure on public works was Rs. 3,72,133, of which Rs. 1,70,424 or 45·8 per cent. were spent, while in the preceding year Rs. 2,04,027 or 68 5 per cent. were spent. The expenditure on irrigation works, buildings and communications fell from Rs. 1,11,428, Rs. 56,348 and Rs. 18,691 to Rs. 87,991, Rs. 44,530 and Rs. 14,907 respectively, but the cost of establishment rose from Rs. 17,560 to Rs. 22,996. The outlay on public works was 4·9 per cent. of the total charges of the year. If the debts repaid and the amounts invested in promissory notes be excluded from consideration, the percentage rises to 6·9, but it was 8·4 in the preceding fasli. In the Kasimkóta estate (Vizagapatam), only 50·5 per cent. of the allotment was spent. The want of a professional engineer in Pithápuram (Gódávari) from September 1900 till the middle of June 1901 mainly accounts for the low expenditure (36·2 per cent.) of the allotment. The supervising establishment employed for Kálahasti (North Arcot), Karvetnagar (North Arcot) and Sivagiri (Tinnevelly), being inefficient and inadequate, excessive delay took place in the preparation and submission of the necessary estimates and the expenditure was only 35·8, 23·5 and 35·0 per cent. of the allotment in each case. The establishments in the first two estates have since been reorganized and placed on a better footing.

Debts due to the estates.

57. The total debts due to the estates at the beginning of the fasli amounted to Rs. 5,09,820; including loans newly granted (Rs. 33,001) and those newly brought to account (Rs. 2,07,328), as also interest accruing during the year (Rs. 73,308) the total sum due was Rs. 8,23,457, of which Rs. 62,700 were collected and Rs. 5,138 written off, leaving a balance of Rs.. 7,55,619 distributed among 29 estates. The outstanding amounts exceeded half a lakh of rupees in Sérugada (Rs. 2,06,560), Pithápuram (Rs. 68,593), Palaiyampatti (Rs. 58,882) and Komaramangalam (Rs. 2,38,397). Almost the whole of the amount shown against Serugada (Ganjám) was due from the zamindar of Biridi who is not bound to repay the principal (Rs. 1,50,000) under a bond until 1906; of the interest, Rs. 33,620 is on the point of realization in satisfaction of a decree. The major portion of the debt outstanding in Pithápuram (Gódávari) (Rs. 65,063) has to be recovered from the personal assets of the late Chinna Chellayyamma Rao and is believed to be irrecoverable. The bulk (Rs. 41,823) of the amount outstanding in Palaiyampatti (Madura) is reported to be irrecoverable; a sum of Rs. 15,646 was due by the Raja of Ramnad and the question of attaching his maintenance allowance is pending in the Sub-Court, Madura (East). In the Komaramangalam estate (Salem) which came under the Court's management during the year under report, no regular accounts for decrees and interest appear to have been kept by the late proprietor and the settlement of the demand under this head has therefore been delayed.

Debts due by the estates.

58. The total amount of debts due by the estates at the beginning of the fasli was Rs. 1,09,24,313. Adding thereto debts newly contracted (Rs. 20,600), debts newly brought to account (Rs. 16,969) and the interest that accrued during the year (Rs. 5,55,039), the total amounted to Rs. 1,15,16,921, of which Rs. 1,59,363 were repaid and Rs. 117 struck off the accounts, leaving at the end of the fasli a balance of Rs. 1,13,57,441 due by 17 estates. The debts outstanding were large in Nandigám (Rs. 52,345), Sálúru (Rs. 1,42,325), Pedda Merangi (Rs. 90,600), Kálahasti (Rs. 36,62,135), Karvetnagar (Rs. 67,65,088), Palaiyavanam (Rs. 1,93,919), Chokkappa Mudaliyar's estate (Rs. 62,307), Sáptúr (Rs. 58,398), Pálaiyampatti (Rs. 1,20,650), Sivaganga (Rs. 59,468) and Punnattur Kovilagom (Rs. 68,588). A portion of the debt due by Nandigám (Ganjám) was repaid during the fasli under report, and the remainder will be discharged as funds accrue. Of the Sálúru (Vizagapatam) debt, Rs. 1,35,000 is not repayable before 1905. The Pedda Merángi estate (Vizagapatam) has sufficient funds on hand, but the creditor declines to accept payment before the stipulated date, viz., 1906.

59. The debts of the Palaiyavanam ward (Tanjore) are covered by usufructuary mortgages. In Chokkappa Mudaliyar's estate (Tanjore) some Rs. 56,000 were realized by the sale of a few villages towards the close of the year. The question of selling one of the estate villages in order to repay the debts due by the Sáptúr estate (Madura) is under consideration. The liabilities of the Palaiyampatti and Sivaganga wards (Madura) will be discharged as funds accrue. Of the debts in

Punnatur (Malabar), Rs. 42,828 were due to private individuals, while the remainder represented items bearing no interest due from the female branch to the different stanams belonging to the male members of the family.

Education of wards.

60. At the beginning of the fasli thirteen wards were under the tuition of the Court's European tutor at Newington, Madras; during the year the Sivagiri minor was also placed under his charge. Towards the close of the fasli the Shulagiri ward was removed to Bellary in consequence of his appointment as a probationary jemadar in the 1st Madras Lancers, one of the native officers in which regiment is his present guardian. All the wards at Newington except the Sálúru, Kasimkóta and Pedda Merángi minors made steady progress. Special attention was paid to their physical development. The usual visit was paid to Ootacamund during the summer of 1901, but work was regularly carried on during the two months spent on the hills. Early in the year, 8 of the minors were taken on tour to Ceylon and several important places in the south of the Presidency. The Śáptúr ward who was married in 1899 was for special reasons permitted to set up a separate establishment in Mylapur, but continued to attend Newington as a day-pupil. The arrangement proved undesirable and has since been terminated. Two wards received education at Bangalore; both were examined at the Court's request by the Inspector of Schools, Central Division; his report was satisfactory. The Sivasamudram (Coimbatore) ward came to Madras during the year on account of the prevalence of plague in Mysore and arrangements were made for his education. The Nandigám (Ganjám) minor and the two Punnattur (Malabar) male wards, who were under private tuition, made fair progress. Of the remaining wards, 8 were reading at various schools in upper secondary, 11 in lower secondary, and 4 in primary classes. The progress of the 9 minors does not appear to have been satisfactory, and the steps to be taken to improve their education are engaging the attention of the Court. The two female wards of the Mamidivada estate (Vizagapatam) and the sisters of the Kavalpara and Punnattur minors (Malabar) made fair progress during the year. The Pithápuram (Gódávari) minor's step-sister and the Telaprole (Kistna) ward's sister continued to receive instruction throughout the year from specially selected governesses.

Suits.

61. The suit for maintenance filed by the widow of the late Raja of Kálahasti having been decided adversely to the Kálahasti estate, an appeal has been preferred to the High Court and is still pending. In execution of a decree against the Raja of Karvetnagar the estate mansion was sold by the District Court. A suit has been filed for its recovery. Another suit against the estate for the recovery of the debts due on the mortgage of the Narayanavanam taluk, is still pending. The litigation with illegitimate members of the Śáptúr family in regard to their claim to a share in the partible property left by their deceased father was compromised during the year.

Encumbered estates.

62. Two of the taluks and many of the villages in a third taluk of the Karvetnagar estate which were in the possession of usufructuary mortgagees were taken under direct management during the fasli under section 39 of Madras Regulation V of 1804. The investigation of the claims preferred against the encumbered estates of Kálahasti and Karvetnagar was completed before the close of the fasli under report. The Court have decided to continue their management beyond the probationary period of two years prescribed in section 38 of the Regulation. The feasibility of raising large loans to discharge the liabilities of the estates or at least the secured debts is under the Court's consideration.

Miscellaneous.

Religious and Charitable Institutions.

63. The current demand on account of religious and charitable institutions in 15 estates under the Court's management was Rs. 4,35,779; the arrears due at the beginning of the fasli amounted to Rs. 1,72,460. Of Rs. 6,08,239 to be collected, Rs. 3,53,970 were collected or remitted during the year, leaving a balance of Rs. 2,54,269, of which Rs. 1,06,672 were included among the arrears due at the beginning of the fasli. The aggregate opening balance at the credit of the institutions was Rs. 62,447; the gross receipts amounted to Rs. 3,45,351 and the gross expenditure to Rs. 3,45,762; the closing balance was therefore Rs. 62,036.

Forests.

Survey.

64. As a Ranger could not be secured for the Pithápuram estate (Gódávari), the forests were leased out. The Court sanctioned the appointment of two Rangers and of a provisional establishment in Karvetnagar (North Arcot). The re-survey of Sérugáda (Ganjám) and the survey of Kasimkóta (Vizagapatam) were completed

during the year under report. The survey of the Berikai (Salem) and Pedda Merángi (Vizagapatam) estates was in progress. During the year under report a license to prospect for graphite over certain land in Sálúru (Vizagapatam) was issued and the prospecting license in respect of manganese was renewed. Village accounts were introduced in the Komaramangalam estate (Sálem) during the year under report. It is reported that they were maintained in nine other estates and it is presumed that they were kept in three more estates.

Minerals.

Village accounts.

REVENUE AND RENT-PAYING CLASSES. (1901–1902.)

65. The more important zamindaris are situated in the Northern Circars and the districts of Nellore, North Arcot, Madura and Tinnevelly. The amount of revenue and water-rate due by zamindars in fasli 1310 was Rs. 64·44 lakhs out of a total land-revenue of Rs. 574 lakhs. Inamdars are numerous throughout the Presidency except in the Nilgiris and on the West Coast. The great majority of them pay revenue to Government in the form of quit-rent. The amount paid as quit-rent and water-rate in fasli 1310 amounted to Rs. 33·89 lakhs. The total number of ryotwari pattas held during the year was 3,299,996 and was 129,902 or 4 per cent. more than in fasli 1309. Of this number 67 per cent. were each held by a single individual, the rest being each held by two or more persons jointly. On the other hand a single ryot may hold more than one patta. Of the pattas 12 per cent. were for amounts less than one rupee each; in 55 per cent. the assessment ranged between Re. 1 and Rs. 10; and in 22 per cent. between Rs. 10 and Rs. 30. Excluding the West Coast districts, the average area of a holding in the lowest group was rather less than three-fourths of an acre assessed at less than 11 annas a holding. In the next group the average extent is less than four acres assessed at Rs. 4½ a holding. In the third group the averages are nine acres for the single and 10·79 acres for the joint holdings; the former paid on the average Rs. 16–2–0 and the latter Rs. 16–11–0 per holding.

CHAPTER III.

PROTECTION.

LEGISLATING AUTHORITY.

The Legislative Council.

1. The Legislative Councils in India were constituted under the Indian Councils Act, 1861, and enlarged by the Indian Councils Act, 1892. The former statute provided that the Council of the Governor of Fort St. George for the purpose of making laws and regulations should be composed of the Ordinary Members of the Governor's Council, and a number of Additional Members including the Advocate General, to be nominated by the Governor, and that the number so nominated should be not less than four nor more than eight in addition to the Advocate General, not less than half of the additional members being non-official persons; while by the latter statute the minimum and maximum numbers of additional members have been fixed at eight and twenty respectively in addition to the Advocate General, and the Governor is empowered to nominate them subject to such regulations as the Governor General in Council may frame with the approval of the Secretary of State in Council. The Madras Legislative Council has been raised to its full strength under this statute. Seven of the non-official members are nominated on the recommendation of the Municipal Commissioners, Madras, the northern and southern groups of District Municipalities, the northern and southern groups of District Boards, the Madras Chamber of Commerce, and the Senate of the University of Madras, one member being recommended by each of these bodies; the other non-official members are nominated by the Governor in such a manner as to secure a fair representation of the different classes of the community; one seat is ordinarily held by a zamindar paying not less than Rs. 20,000 as peshkash annually to Government. An Additional Member once nominated holds office for a period of two years, but his seat may be declared vacant if he is absent from India or is unable to attend to his duties for a period of two consecutive months. Acceptance of an appointment under the Crown by a non-official member renders his seat vacant. At the meetings of the Council, the Governor or, in his absence, the senior Civil Ordinary Member present presides. Four members in addition to the Governor or an Ordinary Member of Council form a quorum for the transaction of business. The President or, in his absence, the senior Member presiding has a casting vote in addition to his original vote, if it is found on a division that the numbers of votes for and against a question put to the Council are equal.

24 & 25 Vic., c. 67.
55 & 56 Vic., c. 14.
55 & 56 Vic., c. 14, s. 1.
55 & 56 Vic., c. 14, s. 4.
24 & 25 Vic., c. 67, s. 34.

Powers of the Legislative Council.

2. The Council is empowered to make laws and regulations for the peace and good government of the whole Presidency and for that purpose it may repeal or amend any law or regulation made prior to 1861 by any authority in India, in so far as it is applicable to this Presidency. The Council may also, with the previous sanction of the Governor General, repeal or amend, as to this Presidency, any law or regulation made at any time by any authority in India other than the Legislative Council of Fort St. George. No alteration in any Act of Parliament may be effected. No measure affecting the public revenues or imposing any charge on them can be introduced without the previous sanction of the Governor; and the previous sanction of the Governor General is necessary for all laws and regulations—

24 & 25 Vic., c. 67, s. 42.
55 & 56 Vic., c. 14, s. 5.
24 & 25 Vic., c. 67, ss. 38, 42, 43.

(1) affecting the public debt of India, or the customs duties, or any other tax or duty now in force and imposed by the authority of the Government of India for the general purposes of that Government;

(2) regulating any of the current coin, or the issue of any bills, notes, or other paper currency;

(3) regulating the conveyance of letters by the post office or messages by the electric telegraph within the Presidency;

(4) altering in any way the Indian Penal Code (India Act XLV of 1860);

(5) affecting the religion or religious rites and usages of any class of His Majesty's subjects in India;

(6) affecting the discipline or maintenance of any part of His Majesty's military or naval forces;

(7) regulating patents or copyright; or

(8) affecting the relations of the Government with foreign princes or states.

24 & 25 Vic., c. 67, ss. 39, 40, 41.

3. No law or regulation passed by the Legislative Council is valid until both the Governor and the Governor General have assented to it. Any such law or regulation may be disallowed by the Crown, but, if it is disallowed, it becomes null and void only from or after the day on which the Governor makes known by proclamation or by signification to the Council that he has received the notification of the disallowance.

Meetings of the Legislative Council.

24 & 25 Vic., c. 67, s. 37. 55 & 56 Vic., c. 14, s. 2.

4. The ordinary rules for the conduct of business in the Legislative Council may be amended at its meetings subject to the assent of the Governor, but the Governor General in Council has power to disallow any such rules; rules relating to the discussion of the financial statement and to the asking of questions are made by the Governor in Council subject to the sanction of the Governor General in Council and may not be altered or amended by the Legislative Council.* Any member may, at a meeting of the Council, apply for leave to introduce a bill. As soon as such leave is granted, he is required to send a copy of the bill with connected papers and a statement of the objects and of the reasons for the proposed measure to the Secretary to the Council, who has them printed and furnished to all the members. The bill and the statement of objects and reasons are published in the official gazette in English and in such vernacular languages as the Governor directs. The Governor may also, in his discretion, direct such publication, although leave to introduce a bill has not been applied for. Fifteen clear days must intervene between publication and introduction. When a bill is introduced, the principle of the bill and its general provisions may be discussed, and, if necessary, it may be referred to a Select Committee for report. Reports of Select Committees must be published in the official gazette in the manner described above, and copies distributed to the members before a measure is brought up for final consideration.

Bills.

Questions.

55 & 56 Vic., c. 14, s. 2.

5. While the Indian Councils Act of 1861 restricted the business of the Legislative Councils to the discussion of bills and the passing of acts, the Indian Councils Act of 1892 extended their functions and authorized them also to discuss the annual financial statement of the province and to ask questions, subject to certain reservations, in relation to the administration. When the Council deals with the financial statement, the discussion must be confined to those branches of revenue and expenditure which are under the control of the Local Government, any criticism of Imperial finance being forbidden. Similarly in respect of administrative matters, interrogations and responses should be limited to matters which are within the control of the Local Government, and, in regard to matters which are or have been the subject of controversy between the Governor General in Council or the Secretary of State and the Local Government, no question should be asked except as to matters of fact, and the answer should be confined to a statement of facts. No discussion is permitted on an answer given to a question. Questions must be so framed as to be merely requests for information and must not be put in an argumentative or hypothetical form or be defamatory of any person or section of the community. If any question cannot be answered consistently with the public interests, it may be disallowed by the President without giving any reason.

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* Under the Indian Councils Acts, 1861 and 1892, the following rules have the force of law in this Presidency: — (1) Regulations for the nomination of Additional Members to the Legislative Council, published in the notification of the Government of India, Home Department, No. 359, dated 17th March 1893, and amended by notifications No. 2425, dated 7th September 1900, and No. 4829, dated 16th August 1901; (2) rules for the conduct of business at meetings of the Council of the Governor of Fort St. George for making Laws and Regulations, passed at the meeting held on the 14th November 1893 and amended on the 18th December 1893, 7th March 1894 and 9th December 1896; and (3) rules for the discussion of the financial statement and for asking questions in the Council, dated 14th February 1893.

COURSE OF LEGISLATION. (1901-1902.)

The Legislative Council.

6. The seat in the Legislative Council which was vacant at the beginning of the year was filled by a nomination made on the recommendation of the Chamber of Commerce, Madras. The terms of office of the remaining six non-official members appointed on the recommendation of public bodies expired during the year; five of the seats so vacated were filled during the year in the usual manner, but the seat vacated by the member recommended by the Senate of the University of Madras had not been filled at the close of the year. Two other non-official members, an European planter and a Muhammadan, were re-appointed during the year. The Council held six meetings and the average attendance of additional members at the meetings was sixteen.

Acts and Bills.

7. The Madras Court of Wards Act, 1902, was the only Act passed during the year. It was introduced by Government and it received the assent of the Governor General on May 7th, 1902. It consolidates and amends the law relating to the Court of Wards and contained in Madras Regulation V of 1804 as amended by subsequent enactments; the provisions of the Madras Court of Wards (Amendment) Act, 1899, were incorporated in this Act without any alteration and the provisions of Regulation V of 1804 were remodelled on the lines of recent legislation on the subject in other provinces in India. A Bill to amend the law relating to land-lord and tenant in this Presidency had been introduced on June 13th, 1898, and referred to a select committee on the same day; this Bill was still pending at the close of the year. No projects of legislation were submitted by the Local Government to the Government of India with a view to their introduction into the Governor General's Legislative Council.

Act I of 1902.

Bill III of 1898.

POLICE. (1901.)

[*Administration Report of the Inspector General of Police for the year 1901; Judicial and Administrative Statistics of British India—VII. Police, pages 73 to 104.*]

The Police Force.

Strength.

8. Owing to the insufficiency of the cadre of superior officers, thirteen sub-divisions had to be left without a separate officer in charge of them during the year (five of them for periods of six months and upwards) and two officers had to be recalled to duty from long leave out of India. The sanctioned strength of the ordinary force was increased by 159 men as special police were employed for plague duty in Bellary and Salem districts. Excluding the punitive police and private guards, the total strength amounted to 3,090 officers and 19,607 men, including 104 village watchers. Recruitment was generally easy, but few men of approved physique who had passed the primary examination offered themselves for enlistment. The proportion of constables (85·4 per cent.) who could read and write was almost the same as in the previous year, but the proportion of inspectors who were graduates rose from 9·1 to 12·5 per cent. Judged by the statistics of punishments, the conduct of the force showed no improvement. The proportion of men punished for offences other than absence without leave increased slightly from 22·3 to 22·7 per cent., the proportion being particularly high in Madras City (43·6 per cent.). There was a satisfactory decline in the number of men fined and the average fine fell from As. 13–8 to As. 10–10; but the fact that the number of black marks and suspensions increased indicates that the decline was due to the issue by the Inspector General of a circular deprecating the excessive infliction of fines. There was a marked increase in the number of dismissals; during the year 34 officers and 422 men were dismissed, whereas only 21 officers and 321 men were dismissed in 1900. The numbers of officers and men convicted in criminal courts rose from 16 and 229 to 20 and 247 respectively; of 200 persons convicted for offences committed in their official capacity, no less than 78 were punished for negligently allowing prisoners to escape and 63 for offences under the Police Act. One constable was hanged for a double murder committed by him with his carbine owing to an imaginary insult to his wife. Although the number of punishments rose during the year there was also a marked increase in the number of rewards and in the total value of the monetary rewards sanctioned by the Inspector General. The number of rewards by promotion rose from 45 to 140 and the number of

Education.

Punishments.

Rewards.

other rewards increased from 4,386 to 4,715. Rewards in money disbursed to 496 men in 1900 amounted to Rs. 2,158-8-0, but in 1901 600 men received monetary rewards amounting in the aggregate to Rs. 2,820. The increase in the number of rewards in money and of rewards by promotion was partly due to the issue of orders that good work done in tracing out absconding offenders and absent known depredators should be more freely rewarded.

Training school.

Of 120 pupils who underwent the final examination in the station-house officers' class of the Police Training school at Vellore, 88 or 73·3 per cent. passed. There were 32 pupils in the Inspectors' class on October 1st. Five Probationary Assistant Superintendents and two junior officers of the Indian Civil Service also attended the school. A scheme for the conversion of the school into a permanent institution was submitted to the Government of India, but its consideration was postponed by that Government, pending the general enquiry by the Police Commission into the organization of the police throughout India.

Cost.

The cost of the force was Rs. 41,93,313, but this amount includes pay for eleven months only, the pay for December 1900 having been disbursed in that month as the Christmas holidays were late; including the pay for December 1900, the cost was Rs. 44,28,363 or Rs. 44,483 more than in the previous year. Of this increase, about Rs. 26,000 represent the pay of the special police employed temporarily in connection with plague, and Rs. 13,000 were increased expenditure on "travelling allowances," which is ascribed to the extension of railways and consequent increase in travelling by rail and to the unusually large number of escorts for treasure and prisoners.

Village police.

There is still a general complaint that very few village magistrates realize their duties in connection with the police and that some actually assist criminals. Favourable reports about village talayaries have, however, been received from a few districts. The issue of badges and staves to village talayaries was extended to two more districts and to two taluks of a third district during the year.

Punitive police.

The additional (punitive) police force employed in Tinnevelly district which originally consisted of an Assistant Superintendent, 3 European inspectors, 6 European head constables, 12 native head constables, 3 buglers and 300 constables, was increased in 1901 by 4 head constables and 58 constables for employment in Nángunéri and Tinnevelly taluks on account of the prevalence of crime there. A Shanar agitation was expected in the south of Tinnevelly on account of an attempt on the part of the Shanars to introduce certain social reforms and their refusal to pay their contribution to the Parava fund, but due precautions were taken to prevent an outbreak. A punitive police force, consisting of one European inspector, one European head constable, two native head constables, one bugler, and 50 constables was stationed at Aruppukóttai in Madura district, and a similar force was stationed at Kamudi in the same district on account of the riots which arose out of disputes between the Shanars and Maravars in 1899. The cost of the punitive police in Tinnevelly district was Rs. 90,211 and in Madura district was Rs. 23,488.

Crime.

9. While the fall in the price of the principal food-grains was slight, there was an appreciable decrease in the number of grave crimes during the year. The city of Madras, the Nilgiris, Kurnool, Cuddapah and Jeypore continued to be the most criminal districts. The number of cognizable cases reported under the Indian Penal Code other than nuisances fell from 66,675 to 64,987, and the number of true cases from 48,936 to 48,379. Of cases returned as true, 26,552 were under special and local laws and 124,371 under public and local nuisances, the corresponding figures for 1900 being 53,919 and 82,900, the apparent decrease in the former being 27,367 and the apparent increase in the latter being 41,471. As, however, cases under sections 71 and 72 of Act III of 1888 (Madras City Police Act) have now been shown under public and local nuisances and not under special and local laws as hitherto, the real increase under public and local nuisances as returned in 1900 was 14,807. On the other hand offences under the Hackney Carriage Act which are non-cognizable had been hitherto returned as cognizable under special and local laws; there was therefore no decrease in the number of true cases under special and local laws as returned in 1900, but an increase of 3,841. The increases under these two heads are ascribed to the special steps taken to prevent a recurrence of omissions of these cases from the returns with a view to reconcile the statistics of crime given in the Police and in the Criminal Justice administration reports.

Grave crime.

There was a marked decrease in grave crime. The number of murders fell from 524 to 463, the smallest number recorded in the last quinquennium. There was one

case of human sacrifice in which a man murdered his own son in the hope of obtaining a revelation regarding some hidden treasure. Two cases of infanticide by women ended in conviction; in one case an unmarried woman, actuated apparently by a sense of shame, threw her new-born child into a well; in the other case a beggar woman killed her child in the same manner because she found that she was refused shelter by villagers as the child cried at night. A rather serious riot occurred in the Sivaganga Zámindari of Madura district as the Labbai inhabitants objected to a Hindu procession passing their mosque. The number of dacoities declined from 677 to 585 and the number of robberies from 746 to 737. A gang working in the neighbourhood of Satyamangalam in Coimbatore district gave a considerable amount of trouble. An important case in which property worth more than a lakh of rupees was stolen by a band of 150 men from the house of a komati woman in Kistna district, remained undetected. The number of cases of house-breaking fell by over 1,000 from 8,996 to 7,955 and the number of ordinary thefts declined from 14,012 to 13,884. The latter included a theft of several yards of wire cut from the main telegraph line connecting Madras and Bombay at Perambúr (Madras). The number of cattle thefts decreased by 621 to 3,320; about one-fifth of these cases (603) occurred in Coimbatore. There were 80 cases of cattle poisoning.

Detection and prevention of crime.

10. The total number of cognizable cases completely investigated by the police was 179,507. Of 59,606 cases reported to the police during the year 92·3 per cent. were investigated immediately on report. In 117,341 out of 119,955 cases taken up by the police, otherwise than on report, public and local nuisances were dealt with under special and local laws. The number of cases under the Indian Penal Code, excluding nuisances, in which investigation was completed during the year was 41,905, but in no less than 11,028 of these cases or 26·3 per cent. orders were issued by the magistracy, on the recommendation of the police, to treat them as false, and the accused were not brought to trial, but the number of cases treated as maliciously or wilfully false was only 4,672; in 3,756 of these cases the police had power to prosecute the complainants on their own motion but action was taken in only 185 cases; the magistrate's sanction to prosecute was requested in 706 of the remaining 916 cases and was refused in 421 cases; prosecutions were actually instituted in only 116 of the 285 cases in which the requisite sanction was accorded. Although, as has been observed, there was an appreciable decrease in grave crime during the year, there was a fall in detection of murder and of cognizable crimes in the aggregate and there was a marked fall in the detection of grave crimes against property. Only 24·4 of the murders committed were detected and the percentages of dacoities, robberies, cases of housebreaking, and ordinary thefts detected were only 18·6, 36·6, 40, and 50·9, respectively. This unsatisfactory state of affairs is ascribed to the unavoidable changes of Superintendents and inspectors, to the inefficiency of station-house officers and in Madura and Bellary districts to the heaviness of the charges of the superior officers of the police. The amount of property stolen during the year was valued at Rs. 16,50,013, of which property worth Rs. 3,60,887 or 21·9 per cent. was recovered; the percentage was better than in 1900 (17) and 1899 (20·2) which were exceptional years on account of the Shanar-Maravar riots but not so good as in 1898 (23·6) and 1897 (24·5). Excluding nuisances 16,956 cases under the Indian Penal Code, were decided judicially; of these 14,113 or 83·2 per cent. ended in conviction, the percentage being nearly the same as in 1900 (83·5). Of 38,109 persons, who were arrested for offences against the State, public tranquillity, safety and justice or against the person or against property, only 53·8 per cent. (20,519 were convicted; the corresponding percentage in 1900 was 56·8. At the close of the year 14,411 known depredators, 952 receivers of stolen property and 1,604 suspected persons, who were on the registers maintained by the police, were at large, the corresponding figures at the end of 1900 being 14,486, 447 and 904 respectively. The number of such persons who were convicted fell to 1,234 from 1,422 in 1900. The method of registering receivers was revised by the inclusion of persons who, though never convicted, were known to be regular receivers. The number of houses of bad repute registered by the police rose from 1,533 to 1,896. There were 109 wandering criminal gangs consisting of 1,243 men, 1,226 women and 2,628 children, of whom 120 men were convicted during the year. The permanent gangs numbered 657 and included 9,866 men, 8,648 women and 15,083 children, of whom 250 men and 11 women were convicted. During the year 2,531 persons were convicted as

False cases.

Detection.

Recovery of property.

Prosecution.

Prevention.

old offenders under section 75, Indian Penal Code; rules under section 565, Criminal Procedure Code, relating to the notification of residence by habitual offenders were issued during the year. The Criminal Identification Bureau received 8,959 cards of finger-prints of convicted persons for registry and identified as old offenders 515 of 3,518 persons regarding whose antecedents references were made. The number of persons (2,273) put up before magistrates under sections 109 and 110 of the Criminal Procedure Code was not quite so high as in 1900 (2,307), but the percentage of persons bound over to those whose cases were decided rose from 56·8 to 65·9.

CRIMINAL JUSTICE. (1901.)

[*Report on the Administration of Criminal Justice in the Madras Presidency, 1901; Judicial and Administrative Statistics of British India—IV. Criminal Justice, pages 22 to 33.*]

Tribunals.

11. In the Presidency town, there was no change in the courts which exercised criminal jurisdiction. In the mufassal, 4,556 Village Magistrates, 59 Bench Magistrates, 3 Cantonment Magistrates, 44 Special Magistrates, 487 Subordinate Magistrates, 89 Sub-divisional Magistrates with appellate powers, 21 District Magistrates, 20 Sessions Judges, 2 Additional Sessions Judges and 2 Assistant Sessions Judges exercised criminal jurisdiction. There were 3 Sessions and 2 Additional Sessions Judges for the agencies as before. An Additional Sessions Judge was appointed in Tinnevelly from 13th February to 24th April 1901 to assist the Sessions Judge in disposing of an unusually large number of cases committed at the close of 1900. The Court of the Stationary Sub-Magistrate, Chendragiri, in North Arcot, was abolished. A Cantonment Magistrate of the third class was established at Poonamallee in Chingleput. The number of Village Magistrates who tried cases in 1901 diminished by 418. The decrease was probably the outcome of a fall in the number of cases filed; but the number of such courts is constantly fluctuating and depends on the local circumstances of each village. Fifty-eight Tahsildars not ordinarily invested with powers under section 190, Criminal Procedure Code, exercised powers under that section.

State of Crime.

12. The number of offences reported during the year under the Indian Penal Code was 120,546 and under special and local laws 221,803, the increase in the former being 1,195 and in the latter 6,966 as compared with the previous year. The total number of complaints rejected under section 203 of the Criminal Procedure Code was 11,355, their proportion to the total number of cases reported being almost the same as in 1900. The percentage of conviction in cases brought to trial was 25·96 in the case of offences under the Indian Penal Code and 86·90 in the case of offences under special and local laws, the average percentage of the previous five years being 25·45 and 84·43 respectively. Out of 96 European British subjects who were tried 55 were convicted. There were marked increases in offences of hurt (+ 959), in offences affecting public health, &c. (+ 695) and in offences of criminal force and assault (+ 475). The number of offences affecting life decreased slightly; the noticeable decrease in thefts (—764) is ascribed to the improved state of the season. The numbers of the cases reported under the Towns' Nuisances Act, the City Police Act and the Forest Act rose by 6,250, 4,297, and 1,761 respectively; almost the whole increase in cases under the Towns' Nuisances Act occurred in Madura; the decrease of 3,836 cases under the District Municipalities Act is almost entirely accounted for by the diminution of 3,407 cases in Madura owing to the fact that prosecutions for selling meat outside the market were no longer necessary. The fall of 2,976 in the number of cases under the Salt Act is ascribed to the infliction of deterrent punishments in previous years and to the rainfall which rendered saline soils unfit for scraping.

The Courts.

13. The total numbers of cases (302,358) and appeals (10,708) instituted during the year in all courts except Village Magistrates' Courts were slightly in excess of those in the previous year. There was an increase in the number of preventive and miscellaneous proceedings taken under the Code of Criminal Procedure. The fall of 1,104 in the number of cases instituted in Village Magistrates' Courts (10,735) was due to the good season. Of 17,047 persons tried by them, 6,600 were convicted,

Village Magistrates.

4,727 being imprisoned and the rest confined in the stocks. There was a slight increase in the number of cases instituted in the regular Magistrates' Courts in the mufassal, the number being 229,205 as compared with 227,935 in 1900; the arrears at the close of the year were, however, less than at the end of 1900. The total number of persons under trial in these courts was 387,451, of whom 379,343 were dealt with, 191,539 persons being convicted; among these were 3,680 juvenile offenders, but only fourteen of them were dealt with under section 31 of Act VIII of 1897; 937 youthful offenders were however sentenced to whipping in lieu of other punishments. The percentage of convictions (51·09) was slightly less than in 1900. Sentences of imprisonment (both rigorous and simple) decreased to a small extent but fines were more numerous and more severe than in 1900. The total amount of fines imposed was Rs. 7,11,531 and the amount realized was Rs. 6,02,865, out of which sums amounting to Rs. 28,164 were paid to complainants as compensation. There was a large decrease in the number of sentences of whipping. The average pendency of cases in Magistrates' Courts was, on the whole, less than in 1900, and varied from one day in Bench Magistrates' Courts to eighteen days in the Courts of Deputy and Assistant Magistrates. The total number of witnesses examined was 356,921, the amount of diet and travelling expenses paid to them being Rs. 87,866. During the year 8,351 appeals were preferred to District and Sub-divisional Magistrates by 15,693 persons, the number of appeals being 399 more than in the previous year; in 62·35 per cent. of these cases, the sentences of the lower courts were confirmed. Of the 702 revision cases dealt with by the Magistrates during the year, 584 were received on applications from parties and the rest were taken up by the courts *suo motu;* the percentage of unsuccessful applications was 71·64. District Magistrates granted rewards, amounting to Rs. 2,115, of which Rs. 795 were granted by the District Magistrate of Tinnevelly; the total amount of rewards disbursed by District Magistrates in 1900 was Rs. 2,222.

Regular Magistrates in the Mufassal.

14. The number of cases committed to the Sessions Courts in the mufassal during 1901 was 1,343, *i.e.*, 176 less than in the previous year. There were 1,798 persons tried by jury, 1,512 with the aid of assessors and 92 both by jury and with assessors; in the case of the remaining 201 persons, either jurors or assessors were not chosen or their opinions were not taken. The jury system is reported to have worked well. Of the persons tried 1,554 or 45·1 per cent. were convicted, 91 persons being sentenced to death subject to confirmation by the High Court. The total amount of fines imposed was Rs. 15,955, but only Rs. 4,016 of the sum were realized in addition to Rs. 941 recovered during the year out of fines imposed in previous years. The average duration of Sessions trials fell from 38 to 34 days. At the end of the year 34 cases were pending, the number pending at the close of 1900 having been 42. The number of witnesses examined (13,435) was 311 less than in 1900, but the number detained more than three days fell from 4,063 to 2,416. The amount of batta and travelling allowances paid to witnesses was Rs. 56,499. During the year 1,470 appeals were preferred to Sessions Courts by 2,243 appellants, the corresponding figures for the previous year being 1,398 and 2,124. The average duration of appeals fell from 27 to 25 days. The percentage of cases in which the sentence appealed against was confirmed was 71·5. Of the 478 revision cases concerning 1,702 persons decided during the year, 405 were filed by parties and 73 were taken up by the Courts *suo motu;* of the petitions 78·02 per cent. were unsuccessful.

Courts of Session.

15. The number of cases instituted in the courts of Presidency Magistrates increased from 67,071 in 1900 to 71,768, owing mainly to the large increase in the number of prosecutions under the City Police Act already mentioned. At the end of the year 35 cases concerning 49 persons were pending. The percentage of convictions remained the same as in the previous year (91). A sum of Rs. 5,444 levied in cases of cruelty to animals was paid to the Society for the Prevention of Cruelty to Animals. The number of witnesses examined rose from 13,746 to 14,224 and a sum of Rs. 1,586 was paid as batta.

Presidency Magistrates.

16. During the year 42 sessions-cases concerning 70 persons were received by the High Court. Six cases were heard with special jurors. Fifty-five persons were convicted and the percentage of convictions fell from 82 in 1900 to 71. Fines amounting to Rs. 18,000 were imposed in three cases, but nothing was realized. The amount of batta and travelling expenses paid to witnesses decreased from

High Court.

Rs. 2,093 to Rs. 1,800. Including three cases pending from the previous year, there were 35 cases referred by Sessions Judges to the High Court under section 307, Criminal Procedure Code. Of these, 30 cases were disposed of during the year; verdicts of guilty were upheld in 4 cases but reversed in 7 cases; verdicts of not guilty were upheld in 5 cases, while similar verdicts were set aside and convictions recorded in 13 cases; in the remaining case concerning three persons, where the jury returned a verdict of guilty, one person was acquitted and two were convicted. The High Court disposed of the cases of 92 persons who were sentenced to death by the Sessions Courts, subject to confirmation by the High Court; the convictions were upheld in the case of 70 persons, the remainder being acquitted; sentences of death were confirmed in the case of 57 persons and commuted to transportation in the case of 11, and to imprisonment in the case of 2 persons. Excluding 83 appeals from sentences of death that came up for disposal with cases under section 374 of the Code of Criminal Procedure, and 32 cases under section 307 of the same Code which were treated as appeals, 772 appeals were received by the High Court during the year; of these 36 were appeals from judgments of acquittal. Of 818 appeals decided, 513 were rejected summarily and 164 others were confirmed. The Court took up 31 revision cases *suo motu*, 41 and 119 cases respectively were reported by Sessions Judges and District Magistrates and 343 applications for revision were received from parties, the corresponding numbers in 1900 having been 52, 57, 105 and 300 respectively. In 75 per cent. of the total number of cases decided, the proceedings of the lower courts were not interfered with. The High Court disposed of 215 miscellaneous petitions.

PRISONS. (1901.)

[*Report on the Administration of the Jails of the Madras Presidency, 1901; Judicial and Administrative Statistics of British India,—V. Jails, pages 34 to 58.*]

Accommodation.

17. The number of central (7) and district (10) jails remained unaltered throughout the year. The Government workhouse was located during the year inside the Penitentiary, Madras, which was raised to the status of a first-class central jail. The number of district jails was one less than in 1900 on account of the abolition of the district jail at Guntúr. The subsidiary jail at Bhuvanagiri in South Arcot district was closed and a temporary subsidiary jail was opened at Polavaram in Gódávari district; the number of subsidiary jails (303) at the close of the year was therefore the same as at the end of 1900. The accommodation available in central jails was increased by 37 to 7,732 by the conversion of store-rooms into wards, the construction of three new cells and the rectification of errors in computing the capacities of cells. The decrease of 245 in the accommodation in district jails (3,281) was mainly due to the abolition of the district jail, Guntúr. The daily average number of prisoners exceeded the permanent accommodation in the central jails at Rajahmundry and Salem and in the Penitentiary and in the district jails at Vizagapatam, Bellary and Palamcottah; overcrowding was avoided by accommodating prisoners in workshops and temporary sheds. Three cells were added at the Penitentiary and two at the district jail, but the number of cells and barracks with separate sleeping accommodation for prisoners remained the same as in 1900 (2,830) on account of the abolition of the district jail at Guntúr which contained five cells. At the close of the year 100 cells at the district jail, Bellary, and 14 solitary cells at the district jail, Nellore, were in course of construction and an estimate for the construction of 25 cells at the central jail, Cannanore, was sanctioned during the year.

Prisoners.

18. The number of prisoners received during the year (102,890) was considerably less than in 1900 (113,188) but was still far in advance of the number admitted during any other year in the past decade. The number discharged during the year exceeded the number admitted by 383 and therefore, as there were 13,621 prisoners at the end of 1900, 13,238 remained at the close of the year. The daily average number of prisoners, however, rose from 12,832 to 13,020, the highest average during the past decade. The figures relating to prisoners under-trial show a reduction as compared with 1900 in the number admitted during the year and in the daily average population. The numbers of escapes and deaths fell from 54

Under-trial.

and 37 to 51 and 22, respectively. Of the 51 escapes, 49 occurred from subsidiary jails. The daily average number of civil prisoners was 171·63 and was 12·91 less than in 1900. The number of admissions and the daily average population were the lowest recorded since 1896; there were no deaths among civil prisoners during the year under report. There were 10 State prisoners at the beginning of the year and one was admitted during the year into the district jail, Vizagapatam; of these 11, five were released from jail and placed under police surveillance, and six remained in confinement at the end of the year. Civil prisoners. State prisoners.

19. The total number of convicts during the year (70,143) was considerably higher than that of any previous year except 1900; this fact was in part due to the large number remaining at the end of the year 1900, viz., 11,383—a figure which was the highest on record and was in advance of the number remaining at the close of the previous year by over 30 per cent. The number received by direct committal was less by 7·6 per cent. than in 1900. The daily average number of convicts rose from 10,435 in 1900 to 10,813, the highest figure recorded in the past decade; as the total number of convicts fell from 75,418 to 70,143, the increase in the daily average number indicates that convicts spent longer periods in jail in 1901 than in 1900, but an examination of the sentences under which convicts were admitted in 1901 and 1900 shows that they were generally shorter in 1901 than in 1900; the number of admissions in 1900 and 1901 was 37,908 and 35,032 and the percentages of convicts admitted whose sentences respectively did not exceed one month, exceeded one month but not 3 months, exceeded 3 months but not 6 months, exceeded 6 months but not one year, exceeded one year but not two years, exceeded two years but not five years, exceeded five years but not ten years, exceeded ten years and of convicts who were sentenced to transportation and of those sentenced to death were 53·07, 19·79, 13·97, 5·89, 2·83, 2·41, 0·81, 0·21, 0·79, 0·23, and 54·73, 18·74, 14·22, 5·78, 2·77, 0·67, 0·05, 0·57, 0·19, 0·24, respectively; these figures show that of convicts sentenced to imprisonment the proportion of those whose sentences did not exceed one month and that of those whose sentences exceeded 3 months but not 6 months were greater in 1901 than in 1900, but the proportion of those sentenced to longer terms of imprisonment was less in 1901 than in 1900. The increase in the daily average number of convicts appears to be mainly due to the facts that the number of convicts at the beginning of the year (11,369) largely exceeded that at the beginning of 1900 (8,707) and that the number of convicts sentenced to long terms of imprisonment in 1900, who remained in jail during 1901, was exceptionally high. The percentage of prisoners sentenced to rigorous imprisonment fell from 86·66 in 1900 to 85·89. The proportion of convicts admitted who were juvenile rose from 1·81 to 1·95 per cent. Orders were issued in December 1901 drawing the attention of magistrates to the inexpediency of imprisoning juvenile offenders except when no other alternative is possible. The number of habitual offenders admitted during the year (2,786) was 220 less than in 1900; 2,671 were identified as such before conviction, the decline from 3 to 2·4 per cent. in the number of identifications of habitual criminals in jails, not recognized before conviction, is attributed to the improved system of identification adopted by the Criminal Identification Bureau. Each jail now contains a complete record of the finger-tip impressions of all its prisoners. All Burman convicts confined in jails in this Presidency were removed to Burma. The number of convicts who escaped was smaller in 1901 than in any of the five previous years. Five convicts escaped from central jails, seven from district jails and nineteen from subsidiary jails. 7·23 per cent. of the male convicts and 4·47 per cent. of the female convicts were employed as officers of prisons; the corresponding percentages in the year 1900 were 6·93 and 3·93. For the first time on record a convict warder, while employed on sentry duty, abused the trust reposed in him and effected his escape. The "mark system" is reported to have worked well. During the year, 2,643 convicts were released under this system, the number so released in 1900 having been 1,926 and in 1899, 1,990. One convict released during the year had earned a remission of 688 days and a gratuity of Rs. 35-14-11. Although there was an increase in the daily average number of prisoners during the year as compared with the previous year, the total number of prison offences fell from 14,891 in 1899 and 14,324 in 1900 to 13,937 in 1901, the decrease being considerable in offences relating to work. There was a corresponding fall in the number of punishments, the ratio of the total number of punishments to the daily average population being 132·38 per cent. in Convicts. Conduct.

1901 and 140·35 per cent. in 1900. Penal diet was more sparingly inflicted than in previous years and restraint by fetters and hand cuffs was used more freely. The number of cases in which corporal punishment was inflicted, declined from 52 cases in 1900 to 45.

Vital Statistics.

20. The death-rate in 1901 was 21·7 per mille; it was lower than in 1900 (25·4), but not so low as in 1899 (16·9). The number of admissions of convicts into hospitals rose from 533·38 per mille in 1900 to 601·38 per mille. Cholera broke out in 3 central and 5 district jails and was specially virulent in the district jail at Madura, where 21 prisoners died of cholera. The number of admissions into hospital at the central jail, Rajahmundry, on account of malarial fever rose from 123 to 543. The percentage of prisoners discharged who had gained weight during their residence in a central or district jail was higher (61·2) than in any year in the previous quinquennium and the percentage of those who had lost weight was lower (17·7) than in any of the preceding five years.

Financial.

21. The total expenditure on jails was Rs. 14,05,291, and was more than half a lakh of rupees in excess of the expenditure in 1900 (Rs. 13,49,953). The dietary charges rose from Rs. 4,23,946 to Rs. 4,84,453, the difference being attributable to the increase in the daily average number of prisoners and to the increase in the value of the stock of rations at the close of the year (Rs. 53,718) as compared with the value of the stock at the end of 1900 (Rs. 26,817); but allowing for the difference in the value of stock, it is found that the average annual cost of diet rose from Rs. 32–6–10, Rs. 31–3–10 and Rs. 38–11–10 in 1900 to Rs. 34–9–0, Rs. 33–5–1 and Rs. 40–5–0 in central, district, and subsidiary jails, respectively. The advance in the expenses in connection with manufactures from Rs. 3,99,684 in 1900 to Rs. 4,33,032 was partly due to the cost of special machinery obtained from England for the Coimbatore Jail. The net earnings in cash on account of manufactures were Rs. 1,39,953, and were Rs. 597 more than in 1900. The fall of Rs. 10,409 in the charges for the establishment (Rs. 2,55,772) is accounted for by the fact that pay for eleven months only was disbursed during the year. The noticeable decline in the charges for clothing and bedding from Rs. 38,200 to Rs. 25,680 is ascribed to the fact that charges for 15 months were included in 1900. There was also a marked decrease in the cost of petty repairs from Rs. 38,075 to Rs. 23,829 owing to the fact that the execution of repairs which were not very urgent were stopped in order to allow other pressing charges to be met. The average annual cost of each prisoner rose from Rs. 66–10–9 to Rs. 68–12–1; the difference appears mainly in the increased cost of diet.

Miscellaneous.

22. The class of assistant jailors was reorganized and such distinctions as hindered their efficiency and adaptability were abolished. An arrangement was made between the Police and Jail departments regarding the conveyance of prisoners by rail in consonance with the orders of the Government of India. Rules under section 565 of the Code of Criminal Procedure regarding the notification of residence by released convicts were issued. The scheme for the concentration of prisoners in subsidiary jails was extended to the districts of North and South Arcot, Trichinopoly and Coimbatore.

The Workhouse.

23. The workhouse was removed to the Penitentiary in January 1901. There were four inmates at the beginning of the year and 15 were admitted during the year. Eight of the new inmates were European British subjects, one was an Australian and six belonged to other classes of British subjects. Four of the 19 inmates obtained employment and were discharged, two were discharged, on obtaining help from relatives, under section 16 of the European Vagrancy Act (IX of 1874), six were released, five absconded, two of them being convicted and sentenced to rigorous imprisonment for one month each and one was released as he was an East Indian and therefore ineligible for admission. At the close of the year there was one inmate in the workhouse. The causes of the increase in the number of inmates who absconded were apparently the removal of the workhouse to the Penitentiary, the enforcement of strict discipline and the deprivation of luxuries. The daily average number of inmates fell from 4·03 in 1900 to 2·09. The total expenditure fell from Rs. 1,954 to Rs. 1,327 and the average cost of each inmate from Rs. 63–15–2 to Rs. 60–9–4.

CIVIL JUSTICE. (1901.)

[*Report on the Administration of Civil Justice in the Madras Presidency in 1901; Judicial and Administrative Statistics of British India, III.—Civil Justice, pages 10 to 21.*]

Tribunals.

24. The Hon'ble Mr. Justice Shephard retired on the 13th July 1901 and Justice Sir Bhashyam Aiyangar, who was appointed in his place, assumed charge of his office on the 1st August 1901. The number of tribunals which exercised civil jurisdiction in 1901, excepting village courts, was almost the same as in 1900. The number of village courts before which cases were tried rose from 5,192 to 5,517; the increase was particularly marked in Madura district (250). The number of district courts was 23, including 3 agency courts; there were 22 Subordinate Judges' courts (including six Assistant Agents) and 138 District Munsifs' courts (including 17 over which Agency Magistrates presided); 65 revenue courts exercised jurisdiction during the year. The local jurisdictions of the various courts in 1901 were the same as in the previous year, save in South Arcot and Ganjám districts. In the former, the jurisdictions of the District Munsifs, excepting Chidambaram and Vriddhachalam were redistributed from 1st April 1901, and in the latter, the jurisdiction of the District Munsif of Berhampore was reduced and that of the District Munsif of Sómpéta correspondingly enlarged from 10th April 1901. The District Munsif of Párvatípuram was transferred to the Gódávari district to assist the Munsifs of Rajahmundry and Ellore from 1st July 1901, while the work of the Párvatípuram court was added to the Razam court. A Subordinate Judge's court was established at Trichinopoly for eight months to enable the District Judge to clear off arrears of work. The Subordinate Judges' court of Bellary and Salem, which had been temporarily transferred to Chittoor (North Arcot district) in December 1900, remained at that station till the end of April 1901, and was then, after the annual vacation, retransferred to Salem.

Litigation.

25. The aggregate number of original suits instituted in all courts in 1901 (347,583) was 17,202 less than the number instituted in 1900 and 24,243 less than the number instituted in 1899. The diminution is attributed to the cumulative effect of a series of rather unfavourable seasons, and in South Arcot district to an exceptionally good crop of ground-nut, in consequence of which several debts were discharged without recourse to law. The large increase of 2,239 in the number of appeals filed (12,376) was almost entirely due to the large number filed under the Rent Recovery Act in Gódávari and Kistna districts. The amounts involved in original and appellate litigation rose by about $8\frac{1}{2}$ and nearly 13 lakhs of rupees to Rs. 4,60, 61,000 and Rs. 50,92,000, respectively. The number of suits instituted before village courts (89,527) was 4,292 less than in 1900; the decrease, which occurred chiefly in Tanjore and Madura, is partly ascribed to the census, which gave much extra work to village officers. In revenue courts 10,299 suits (1,646 less than in 1900) were instituted; the fall of 1,849 suits in Gódávari district was due to arrangements made between the receivers of two estates and tenants. The total number of ordinary suits and small causes instituted in District Munsifs' courts amounted to 79,956 suits and 125,457 small causes or 4,683 suits and 4,433 small causes less than in 1900. The decrease in ordinary suits occurred in all the districts except Madura and North Malabar and was greatest in South Arcot, Chingleput and Gódávari. There was a decrease of more than 1,000 small causes in each of the districts of Tanjore, South Arcot and Gódávari; an increase of over 1,000 small causes in Nellore is attributed chiefly to the filing of a large number of suits by the Raja of Venkatagiri for the recovery of rent. The number of ordinary suits (omitting suits instituted in the courts of Assistant Agents) in Subordinate Judges' courts (882) was nearly the same as in 1900 (877); small causes decreased from 19,360 in 1900 to 18,927. The number of ordinary suits instituted in District courts rose from 441 in 1900 to 494, while small causes fell from 1,941 to 1,480. The increase in ordinary suits was common to almost all districts, but in Trichinopoly, the number instituted fell by 31. In the same district the fall in small causes by 350 was noticeable; this was due to the institution of the temporary Subordinate Judge's court. Including appeals from Agency courts 10,211 regular and 395 miscellaneous appeals were filed in courts in the mufassal during the year,

Village courts.

Revenue courts.

District Munsifs' courts.

Subordinate Judges' courts.

District courts.

the number filed in 1900 being 8,391 and 383 respectively. The increase was mainly due to the number of appeals preferred under the Rent Recovery Act in Gódávari and Kistna districts. The number of suits instituted in the Presidency Court of Small Causes was 18,883 or 1,354 less than in the previous year. The average value of suits (Rs. 65) was Rs. 2 higher than in 1900. There were 454 applications for ejectment of tenants or practically the same number as in 1900. The number of suits instituted in the City Civil Court fell from 352 in 1900 to 325. The average value of suits rose from Rs. 813 to Rs. 869.

Courts in the Presidency Town.

High Court.

26. During the year 236 suits were instituted, the number instituted in 1900 having been 235. The average value of suits decreased from Rs. 16,594 to Rs. 13,374. The number of appeals of all kinds preferred to the High Court (2,271) was slightly more than the average number filed annually during the previous five years (2,251). The aggregate and average values of appeals from original decrees were Rs. 25,13,679 and Rs. 8,323; in both cases the figures are considerably less than the corresponding figures for 1900 (Rs. 39,78,987 and Rs. 11,145); on the other hand, the aggregate and average values of appeals from appellate decrees were Rs. 4,73,059 and Rs. 281 in 1901 and Rs. 3,71,802 and Rs. 268 in 1900.

Disposal of business.

Village courts.

27. The system of trial by bench-courts constituted under section 9 of the Village Courts Act was in force in sixteen districts, but cases were tried by such benches in ten districts only. Out of 97,297 cases for disposal in village courts 89,796 were decided during the year, but, though the arrears fell from 7,770 at the beginning of the year to 7,501 at its close, the decrease was not proportionate to the diminution in the number of suits instituted; the largest numbers of cases were disposed of in Tanjore and Madura districts (14,210 and 11,672, respectively). The number of suits decided by revenue courts (13,359) was 66 per cent. more than the number decided in 1900, and the arrears consequently fell from 5,350 to 3,077; in Gódávari district 4,933 cases were disposed of and the arrears were reduced from 2,757 to 23 cases. The average durations of contested suits and of uncontested suits were high in Gódávari (179 and 184 days) and in Madura (157 and 149 days). The number of suits decided by the Agency courts (931) was somewhat larger than in 1900, but the arrears remained stationary (47). The average pendency of contested suits exceeded a year in the Agents' courts of Gódávari and Vizagapatam, in the Deputy Collector's court, Gódávari, and in the Munsifs' court at Palkonda; adjournments granted at the request of parties and the difficulty experienced in securing the attendance of witnesses are stated to be the chief causes of delay. The number of appeals decided by Agency courts was 65; the number pending at the close of the year (8) was four less than the number pending at its beginning. Out of 105,675 ordinary suits and 137,785 small causes for disposal by District Munsifs, they decided 81,903 and 128,292 respectively; these figures are less than the corresponding figures in 1900, but the arrears fell from 24,424 and 11,038 at the beginning of the year to 23,772 and 9,493 respectively at its close. The number of contested cases decided was almost stationary on the whole, as 39,761 ordinary suits and 27,145 small causes were decided in 1901 against 38,810 ordinary suits and 28,016 in 1900. Extended powers were exercised by 15 District Munsifs, who treated suits the values of which did not exceed Rs. 100 each, as small causes; and 21 District Munsifs exercised powers to try as small causes suits the values of which did not exceed Rs. 200 each. The former decided 4,342 suits, having values between Rs. 50 and Rs. 100 each, and the latter decided 10,344 suits, the values of which were between Rs. 50 and Rs. 200 each. The average pendency of contested ordinary suits exceeded one year in Ellore and Tanuku; long pendencies were as usual due either to the disposal of old suits in preference to those of later date or to the intricate nature of the cases. The average pendency in contested small causes exceeded three months in five courts and was highest in Kávali (103 days). The decrease in arrears was most noticeable in Madura where the number of pending small causes fell from 2,300 to 808. The number of ordinary suits pending for more than one year fell from 1,114 in 1900 to 1,025, but the number of small causes pending for more than three months rose from 311 to 930, mainly on account of 478 suits in Gódávari, the disposal of which was delayed pending the disposal of a second appeal to High Court and on account of 210 suits for rent in Madura which involved a question of limitation, the decision of which was pending in the High Court in connection with

Revenue courts.

Agency courts.

District Munsifs' courts.

similar suits. During the year, 982 ordinary suits and 18,760 small causes were decided by Subordinate Judges, the corresponding figures for the year 1900 having been 1,009 and 19,896. Of these, 694 ordinary suits and 5,522 small causes were contested. The average pendency of contested original suits exceeded one year in Negapatam (424 days) and that of contested small causes exceeded three months in Tanjore (113 days), Negapatam (97 days) and Mangalore (96 days); the long pendency in Negapatam and Mangalore was partly due to the absence of the Subordinate Judges for one month each. Arrears of ordinary suits and small causes increased from 574 and 2,201 in 1900 to 590 and 2,704 respectively; the number of ordinary suits pending for more than one year and small causes pending for more than three months rose from 85 and 169 in 1900 to 103 and 502 respectively. The number of appeals for disposal in Subordinate Judges' courts was 2,929, of which 2,155 were decided; the arrears were reduced during the year from 1,005 to 774. The average duration of contested appeals, exceeded six months in Tanjore (261 days), Madura (East) (223 days) and Mangalore (213 days). District courts disposed of 105 ordinary suits more and 240 small causes less than in 1900, the number of ordinary suits and small causes decided being 460 and 1,442. On the average 115 days in the year were available for the disposal of civil cases in District courts, the corresponding number in the previous year having been 107. The average duration of both contested and uncontested ordinary suits was very high in Kurnool (617 and 754 days); the long pendency of cases in this and some other courts is traceable mainly to heavy sessions either in 1901 or previously. The arrears of ordinary suits (383) fell slightly and the arrears of small causes rose from 477 to 502. Of 6,549 appeals decided by District courts, 5,654 were contested. The average pendency both of contested and uncontested appeals exceeded six months in Salem, Tanjore, Bellary, Kurnool and Trichinopoly and of contested appeals in South Canara, Kistna and Tinnevelly. Long pendency is ascribed in some of these courts to heavy sessions work. Arrears increased from 4,128 to 5,860 cases. The increase was noticeable in Gódávari where 1,952 were pending at the close of the year; this was due to the filing of a large number of rent appeals in the latter part of the year and to the postponement of the decision of several other appeals pending the disposal of connected appeals preferred to the High Court. The number of applications for execution of decrees for disposal in all courts in the mufassal rose from 266,616 to 272,558, of which 242,593 were disposed of. Institutions and disposals increased in Subordinate Judges' courts and District Munsifs' courts. The number of wholly infructuous applications (179,454) bears a large proportion to the total number disposed of, but it should be noted that under this head are included 113,510 applications which were withdrawn, not prosecuted or rejected, indicating either settlement out of court or claims not legally supportable. Arrears increased, but very slightly. The number of judgment-debtors imprisoned in execution of decrees was 951, the largest numbers imprisoned being again in Tanjore, Coimbatore and Madura. The number of applications relating to insolvency for disposal was 790, of which 636 were disposed of. Of 377,837 miscellaneous applications for disposal by courts in the mufassal, 366,625 were disposed of.

Subordinate Judges' courts.

District courts.

Execution.

Insolvency.

Miscellaneous Cases.

28. There were 20,887 suits for disposal in the Presidency Court of Small Causes, of which 19,433 were disposed of. Of the latter only 2,207 were contested. The average pendency of contested cases was 59 days and of uncontested 32 days. These figures present no very marked differences from those of the previous year. On the whole a decrease in the number of cases instituted was naturally followed by a smaller output of work and the arrears were diminished. Of 15,815 applications for execution for disposal, 14,419 were disposed of. Here also the number of applications described as wholly infructuous appears extremely large (11,244), but it must be borne in mind that a considerable proportion of these were withdrawn, not prosecuted or rejected (4,877). The number of judgment-debtors imprisoned was 334. The number of miscellaneous applications for disposal amounted to 3,756, of which 3,577 were disposed of, their average pendency being 16 days. As in the case of the Presidency Small Cause Court, the fluctuations in the business done by the City Civil Court do not call for special remark; a slight fall in the number of cases decided (329) was the result of a decrease in the number of cases instituted (325). The number of arrears remained almost stationary. The average durations of contested and uncontested suits were reduced from 201 and 47 days to 148 and

Courts in the Presidency Town.

32 days, respectively. Of 499 applications, 436 for execution were disposed of; of these, 254 were wholly infructuous, 241 being withdrawn, not prosecuted or rejected. Eight judgment-debtors were imprisoned. There was an increase in the number of miscellaneous cases, and 1,329 miscellaneous applications were disposed of, the number for disposal being 1,353.

High Court.

29. The figures representing the work of the High Court on the original side in 1901 show no very marked variation from those of the previous year. There was a small diminution in the number of cases for disposal (343) and disposed of (232) and arrears slightly (111) increased. Reference to a Judge in chambers was ordered in 6 cases. The number of such cases for disposal was 23, of which 12 were disposed of, the work occupying a Judge for 9 days. The average pendency of both contested and uncontested suits (162 and 205 days) increased slightly. The number of applications for execution rose from 158 to 305; the number pending at the close of the year was 228, in 107 of which orders for the attachment of moveable or immoveable property had been passed and property had been attached, but no further steps were taken before the end of the year. Rs. 28,151 were realized through the Sheriff of Madras and the amount realized by the sale of property under mortgage decrees amounted to Rs. 64,866. Seven judgment-debtors were imprisoned. During the year, 460 applications for the benefit of the Act for the relief of insolvent debtors were pending, and 218 were disposed of, 160 applications being granted and 58 dismissed; one judgment-debtor was committed to prison. Relief was applied for by 311 persons during the year and the total amount of debt in respect of which relief was sought was Rs. 9,79,473. The Insolvent Court granted protection orders in 207 cases and disposed of 48 miscellaneous applications besides 102 applications from the Official Assignee. The High Court disposed of 1,454 miscellaneous applications on the original side. The numbers of first and second appeals from decrees for disposal (798 and 3,309 respectively) were larger than in 1900, and 309 first appeals and 1,090 second appeals were decided, the numbers of such appeals decided in 1900 being 246 and 1,300, respectively. The average durations of first and second appeals were 411 days and 475 days. The arrears of first and second appeals increased to 265 and 1,094; of these 12 and 70 respectively had been heard and remitted for findings. The number of revision petitions received rose from 415 in 1900 to 491 in 1901; of these 331 were for revision of proceedings in courts of small causes. The number of revision cases decided fell from 512 in 1900 to 341; in 228 cases the decisions of lower courts were confirmed, in 74 cases they were reversed or varied and in 39 cases new trials were ordered. The number of pending revision petitions rose from 237 at the beginning of the year to 387 at its close; of the latter 245 were pending for more than three months. Sixteen referred cases were disposed of. On the appellate side 1,396 miscellaneous applications were received and of 1,627 for disposal, 1,341 were disposed of. Fifteen applications for leave to appeal to the Privy Council were received in the year. Including 5 applications pending from 1900, there were altogether 20 applications for disposal, of which 7 were disposed of, certificates being granted in 4 cases. Including 3 cases in which the records were despatched during the year, there were 12 cases before the Privy Council for disposal, of which 5 were disposed of. In 36 cases the records were under preparation in the High Court.

Financial.

30. As many courts exercise both civil and criminal jurisdiction the expenditure on the administration of civil justice and that on the administration of criminal justice cannot be separated. The total receipts and charges of civil and criminal courts as furnished by the Accountant General amounted to Rs. 63,46,607 and Rs. 49,63,339, respectively. The receipts from process fees in mufassal civil courts, excluding discount for the sale of court-fee stamps, were Rs. 12,35,944, and the charges of the process service establishment were Rs. 6,05,681. The receipts in copy stamp papers in mufassal civil courts, excluding charges on account of their supply at 20 per cent., amounted to Rs. 1,89,479, and the charges of the copying establishments amounted to Rs. 1,55,435.

Miscellaneous.

31. In the course of the year 3 advocates and 23 vakils were enrolled in the High Court, and in connection therewith fees amounting to Rs. 13,000 were levied under the Stamp Act and Rs. 260 under the Court Fees Act.

High Court Practitioners. Pleaders.

32. One hundred and ninety-two candidates applied for admission to the annual pleadership examination. Ten passed in the first grade and 84 in the second

grade. The receipts from examination fees, including Rs. 40,183-6-4 reserved in the previous year, were Rs. 46,868-6-4; out of which a sum of Rs. 41,814-13-3 was reserved, the balance (Rs. 5,053-9-1) having been expended. Certificates were issued by the High Court during the year to 173 pleaders. The stamp and admission fees realized on the certificates issued amounted to Rs 1,077-8-0 and Rs. 2,388, respectively. During the year 2,273 pleaders' certificates were renewed. The stamp fees collected thereon amounted to Rs. 40,425. The total receipts from stamps and admission fees amounted to Rs. 43,890-8-0.

33. The District Judge of Ganjám was the only District Judge who inspected all the courts in his district. In three districts no courts were inspected and in other districts only one court was inspected in each. Inspection by District Judges.

REGISTRATION. (1901-1902.)

[*Report on the Administration of the Registration Department in the Madras Presidency for the three years ending 1901-1902; Judicial and Administrative Statistics of British India, IX—Registration, pages 106-107, 128-129, 132-136.*]

34. Four new sub-registrar's offices were opened during the year; the number of offices at the close of the year was therefore 438, of which 21 were under District Registrars, 404 under Sub-Registrars and 13 under Revenue officers. With a view to secure better supervision over the administration of Joint Stock Companies in the mufassal, District Registrars were appointed Assistant Registrars four of Joint Stock Companies. Registration offices.

35. The total number of registrations in Books I, III and IV in 1901-1902 amounted to 990,792 and was the highest on record, although the number of registrations in the latter half of the year was less than that in the corresponding period of the previous year. Documents relating to immoveable property entered in Book I (950,606 in number) constituted 96 per cent. of the total number of documents registered; their aggregate value (Rs. 19,59,78,037) was higher and their average value (Rs. 206) was lower than in any year in the preceding quinquennium. The number of such documents registered increased under each of the heads into which they are classified except under instruments of perpetual lease and instruments of mortgage of less value than Rs. 100, under each of which there was a trifling decrease. The increase in the number (36,345) of registrations affecting moveable property recorded in Book IV is not so marked as in the number recorded in Book I, the advance in the former being nearly 1·4 per cent. and in the latter more than 2·4 per cent. of the corresponding number registered in the previous year; the increase in the number (3,831) of wills registered in Book III was however 16·8 per cent.; the advance in Malabar, where the increase is particularly marked, is ascribed to the Malabar Wills Act of 1898. It is noticeable that although the number of perpetual leases fell from 4,196 to 4,158, the aggregate value of the annual rents rose from Rs. 3,37,095 to Rs. 5,04,023, and on the other hand the aggregate value of the annual rents of other leases which were compulsorily registered declined from Rs. 55,39,005 to Rs. 44,67,658, although the number of such leases advanced by nearly 10·9 per cent. from 54,305 to 60,216. Although a greater number of deeds affecting moveable property was registered in 1901-1902 than in 1900-1901, yet the aggregate value of those registered in the former year (Rs. 1,06,45,912) was considerably less than the aggregate value of those registered in the latter (Rs. 1,08,19,735) and their average value in 1901-1902 was Rs. 293 and in 1900-1901 was Rs. 302. Registration.

36. No documents remained uncopied in registration offices at the close of the year 1901-1902. Of the total number of documents registered 70·39 per cent. were copied on the day of presentation. There were slight arrears in the compilation of indices in nine offices. The examination of duplicate indices in sub-registrars' offices was completed in all districts except North Arcot and South Canara. At the end of the year 2,986 registered documents were unclaimed, of these 2,251 were registered in the year 1901-1902, 658 in the previous year, Business in Registration offices.

54 in 1899–1900 and 23 in preceding years. The number of cases in which registration was refused rose from 1,744 to 1,857, but the increase in the proportion of the number rejected to the number registered (nearly 1·9 per cent.) was very small. In appeals against such refusals, registration was ordered in 365 cases and refused in 165 cases. The numbers of documents registered on payment of fines were 94 under section 24 and 172 under section 34. There were 23 prosecutions instituted under section 83. The number of searches rose from 50,569 to 51,219 and the number of applications for copies advanced from 41,229 to 46,038. Decreases in the numbers of loans granted by Government under the Land Improvement Loans Act and under the Agriculturists' Loans Act are indicated by the fall in the number of registered orders under the former from 4,142 to 2,279 and under the latter from 1,506 to 935. The number of registered orders under section 316, Code of Civil Procedure, rose from 12,537 to 12,842. The increase in the number of registered awards under the Land Acquisition Act from 1,560 to 3,680 is ascribed to the acquisition of land for the Calicut-Cannanore, Madura-Pámban, and the Tinnevelly-Quilon railways.

Financial.

37. The total expenditure rose from Rs. 9,42,452 to Rs. 9,76,796, the increase being mainly due to the issue of a revised type-design of a sub-registrar's office, pending the receipt of which the construction of certain buildings had been postponed in the previous year. The total amount remitted to the treasury rose from Rs. 14,42,158 to Rs. 14,42,259; the net income fell therefore from Rs. 4,99,706 to Rs. 4,65,463. The balance to the credit of the department on the 31st March 1902 was Rs. 68,93,445. The average fee levied on a document rose from Re. 1–3–5 in the year 1900–1901 to Re. 1–3–7. The total amount of fees levied advanced from Rs. 11,75,241 to Rs. 12,10,926. The amount of process fees levied in connection with appeals presented to Registrars was Rs. 6,701, of which Rs. 5,987 were disbursed to process servers and Rs. 661 were remitted to the treasury.

Miscellaneous.

38. Thirty-seven officers of the Registration department exercised third-class magisterial powers for the trial of offences under the Towns' Nuisances Act and disposed of 4,395 cases. Out of 417 sub-registrars' offices 311 were inspected by District Registrars who, in the previous year, inspected all the offices; the Inspector General inspected 16 out of 22 district registrars' offices. The reason for the deficiency in inspection was that the Government of India ordered towards the end of the year 1901 that the report of the Registration department should deal with the transactions of a calendar year and not of an official year, and further orders modifying the original orders were received in February 1902, when it was too late to complete before the close of the official year, the inspection of offices inspected in the first quarter of 1901.

Notaries Public.

39. The number of registering officers appointed Notaries Public was 188 as in the previous year but only nine did any work as such. The total number of instruments dealt with was 341 of which 305 were bills of exchange and 29 were promissory notes; in the former year 155 bills of exchange and 15 promissory notes were dealt with. The increase, which occurred chiefly in Tellicherry, is attributed to unpaid bills drawn by Calcutta merchants for consignments of inferior rice sent without orders. The numbers of bills noted and protested rose from 1 and 154 to 8 and 297 respectively; all the promissory notes dealt with were only noted. Of 334 instruments 286 related to non-payment and 48 to non-acceptance. The aggregate value of the transactions (Rs. 4,61,269) was Rs. 2,31,322 more than in 1900–1901. The fees collected amounted to Rs. 929 and disbursements to Rs. 47, Rs. 884 being remitted to the treasury. District Judges made no inspections under rule 4 of the notarial rules.

Registered Companies.

40. During the year the sanction of the Government of India was obtained to the appointment of District Registrars as Assistant Registrars of Joint Stock Companies. At the beginning of the year there were 361 registered companies whose aggregate nominal and paid-up capitals were Rs. 5,44,65,082 and Rs. 2,43,56,104; at its close 379 companies (excluding 19 companies having no capital paid-up) were working with aggregate nominal and paid-up capitals of Rs. 5,44,43,651 and Rs. 2,50,69,804. The average nominal and paid-up capital of the companies working at the end of year fell from Rs. 1,44,087 and Rs. 64,434 to Rs. 1,36,793 and Rs. 62,986. Eleven companies increased their nominal capital during the year and no company reduced its capital under an order of a court. Thirty companies were wound up; their

aggregate nominal and paid-up capitals were Rs. 67,38,120 and Rs. 18,74,271; they included the Pursewaulkum Hindu Jananukula Permanent Society, Limited, and its First Branch, Limited, with a total nominal capital of Rs. 14,07,000, the Minatchi Mills and the Tanjore Mills Company, Limited, which came into existence with capitals of Rs. 6 lakhs and Rs. 10 lakhs respectively, but never commenced business, and the Gódávari Coal Company, Limited, with a capital of Rs. 10,08,000 wound up on account of the prevalence of fever among the Company's servants. Fifty companies were registered during the year; the liabilities of all these except the Kotagiri Club and the Madras Trades Association were limited by shares. Of the 50 companies 34 were banking and loan companies, 12 were trading companies, one was a mill and one was a brewery. The most important companies registered during the year were the Madras Union Bank, Limited, with a nominal capital of Rs. 5 lakhs, Messrs. Massey & Co., Limited, with a fully paid-up capital of Rs. 6 lakhs and the Indian Fibre Company with a nominal capital of Rs. 4 lakhs. Nineteen companies were limited by guarantee at the end of the year. As far as could be ascertained no company in the Presidency town took advantage of the provisions of the Indian Companies Branch Registers Act (IV. of 1900). The registration fees collected during the year amounted to Rs. 8,278, the amount collected in the previous year having been Rs. 5,429. The expenses were Rs. 1,204, leaving a balance of Rs. 7,074 to the credit of Government.

LOCAL BOARDS ADMINISTRATION. (1901–1902.)

[*Judicial and Administrative Statistics of British India,—XVIII. Local Boards, pages 350 to 357.*]

Local boards and union panchâyats.

41. On the 1st April 1901, Madras Act VI of 1900, which amended the Madras Local Boards Act V of 1884, was brought into force in all the districts of the Presidency, except Madras where the City of Madras Municipal Act I of 1884 was in operation. As in the previous year, there were 21 district boards or one for each of the mufassal Collectorates. Each district board consisted of the Collector of the district as *ex-officio* member and President and not less than 24 other members, the officers in charge of revenue divisions being *ex-officio* members. In the Nilgiris, however, the minimum number of members, other than the President, was fixed at 12. On the last day of the year these boards had 651 members or 13 more than in the previous year, while the sanctioned maximum strength was reduced from 700 to 697. Of the total number 82 were *ex-officio* members, 259 (84 officials and 175 non-officials) were nominated by Government and the remaining 310 (105 officials and 205 non-officials) were elected by the taluk boards, while in the previous year 80 were *ex-officio* members, 250 (79 officials and 171 non-officials) were nominated members and 308 (102 officials and 206 non-officials) elected members. One-half of the sanctioned number of members of each district board were elected by the taluk boards in all the districts, except the Nilgiris in which there are no taluk boards, and Gódávari where the elective strength is fixed at a little less than one-half. The number of meetings held by district boards rose from 217 in the previous year to 246, and the average attendance of members at each meeting was 16 (6 officials and 10 non-officials) out of an average strength of 31 for each board. There were 80 taluk boards or one more than in the previous year. Each of these boards consisted of the Revenue Divisional-officer as *ex-officio* member and President and not less than 12 other members appointed by Government. On the 31st March 1902 there were on these boards 1,113 members or 13 more than in the previous year, while the sanctioned maximum strength was 1,175 or 12 more than in that year. Of these, 315 were officials and 798 non-officials, the corresponding figures for the previous year being 307 and 793. These boards met altogether 1,018 times or 16 more than in 1900–1901, and each meeting was, as in that year, attended on an average by 8 members (2 officials and 6 non-officials) out of an average strength of 14 for each board. The presidents of district boards continued to exercise the powers of re-appointing the members of taluk boards originally appointed by Government and of accepting the resignations tendered by the members of district and taluk boards. The taluk boards in all the districts except South Canara and Malabar had union panchâyats working as their agents. There were altogether 381 unions or two more than in the previous year and the affairs

of each were managed by a panchâyat consisting of not less than five members, the headmen of the revenue villages, any portions of which were comprised in the unions, being *ex-officio* members, while the other members were appointed by the presidents of district boards in the exercise of the power delegated to them by the Governor in Council. The presidents of district boards likewise continued to exercise the power of removing these members. The number of members of panchâyats fell from 3,563 in the previous year to 3,524 on March 31st, 1902. Of these, 842 were village officers, 282 other officials and the remaining 2,400 non-officials, while in the previous year there were 831 village officers, 286 other officials and 2,446 non-officials. The number of meetings held by the panchâyats rose from 4,871 to 5,009. The work done by these bodies was, as hitherto confined to the making of sanitary arrangements and the construction and repair of roads in the villages comprised in the unions; but in some cases the management of primary schools, choultries and markets was entrusted to them by the tâluk boards together with the funds required for their maintenance. The working of the local boards and union panchâyats continued to be, on the whole, satisfactory.

Receipts.

42. As in the previous year, the cess on land was levied at As. 2 per rupee of the assessment in Malabar and the Nilgiris (except a portion of South-East Wynaad), at As. 1–6 in South Canara, and at Anna 1 in the remaining districts and in South-East Wynaad (excepting the Ouchterlony valley). Tolls upon carriages, carts and animals were levied in all the districts, except Gódávari, and at 290 gates as in the previous year. House-tax was in force in 380 unions as in 1900–1901. The maximum rates were levied in 261 unions, three-fourths rates in 79, two-thirds rates in 6 and half rates in the remaining 34.

43. The year opened with a balance of Rs. 24,19,248 or Rs. 3,67,180 more than in the previous year. Excluding debt heads (Rs. 12,78,899), the actual receipts rose from Rs. 87,78,947 in 1900–1901 to Rs. 90,14,566. The revenue from rates and taxes showed an increase of Rs. 1,91,763, being the result of a rise of Rs. 1,01,792 under land-cess, Rs. 13,834 under tolls and Rs. 76,137 under house-tax. The rise under land-cess was the net result of an increase of Rs. 2,43,476 in twelve districts and a fall of Rs. 1,41,684 in the remaining nine. The increase which occurred chiefly in Gódávari and Nellore, was due in the first case to the adoption of the revised settlement rates and in the second to the collection of arrears. The increase under tolls consisted of a rise of Rs. 550 in the revenue realised from local fund toll-gates and of Rs. 13,284 in the contributions paid by municipal councils as the local boards' share of the tolls collected by them. The large increase in the latter case occurred chiefly in Tinnevelly and was due (1) to a rise in the toll revenue of the Palamcottah municipal council owing to keen competition at the sale of the leases and (2) to the payment by the municipal council of Tinnevelly of the arrears of the previous year. The enhanced receipts under house-tax, which occurred in all the districts except Bellary, was due to the levy of the tax in accordance with the revised schedule introduced by Act VI of 1900. A sum of Rs. 3,22,213, or Rs. 36,953 more than in the previous year, was received as grants from provincial funds. Out of this amount Rs. 1,24,515 were contributed for public works, Rs. 96,045 for schools, Rs. 41,259 for hospitals and dispensaries, Rs. 34,569 for choultries and Rs. 25,825 for general purposes. The bulk of the grants for public works was paid to the district boards of the Nilgiris (Rs. 73,220), Ganjám (Rs. 35,835), Nellore (Rs. 7,028), Bellary (Rs. 4,700) and Trichinopoly (Rs. 2,000). With the exception of Rs. 1,200 and Rs. 1,272 respectively paid to the Vellore taluk board for the support of the Yeomiah and Muhammadan Orphan schools at Arcot, the grants made to schools were disbursed by the Director of Public Instruction under the provisions of the Grant-in-Aid Code. The grants paid on account of hospitals and dispensaries represent chiefly the provincial share of the pay and allowances of medical subordinates employed in the medical institutions maintained by the local boards. The grants for choultries were paid to the local boards in Anantapur, North Arcot, South Arcot, Coimbatore, Gódávari, Kurnool, Madura, the Nilgiris, Salem, Tanjore and Tinnevelly, in lieu of lands originally assigned for the maintenance of choultries by their founders and subsequently resumed by Government. The grant for general purposes consisted almost entirely of Rs. 25,780 paid to the district board of the Nilgiris in consideration of the smallness of their revenues.

Expenditure.

44. Excluding those under debt heads, the total charges of the year rose from Rs. 82,20,556 to Rs. 99,93,686.

Public works.

45. The outlay on public works rose from Rs. 35,30,224 to Rs. 35,46,735, and of this sum Rs. 6,48,718 were spent on the construction of roads, bridges, school-houses, dispensaries and markets, and the remaining Rs. 28,98,017 on the repair of the existing works. Seventy-nine miles of road were newly constructed at an outlay of Rs. 86,650 and 21,662 miles repaired at a cost of Rs. 24,96,085, while 107 miles of road were constructed and 21,698 miles repaired at a cost of Rs. 93,151 and Rs. 24,64,078 respectively in 1900-1901. As usual, the local boards maintained their own engineering establishments, but in a few cases the construction and maintenance of roads running along tank bunds and canal or channel banks were entrusted to the Public Works department for execution.

Medical institutions and vaccination.

46. The number of hospitals maintained by the local boards fell from 127 to 126, while that of dispensaries rose from 219 to 222. The cost of maintaining these institutions rose from Rs. 5,38,752 to Rs. 5,72,312 and the number of patients treated in them was 2,831,245 or 91,391 more than in the previous year. Excluding ten nurses in Cuddapah who attended 664 cases of labour, there were 249 trained midwives employed by the local boards at a cost of Rs. 34,049 and they attended 18,130 cases of labour, while in the previous year 244 midwives, who were maintained at a cost of Rs. 32,707, attended 17,712 cases. The vaccine staff employed by the district boards consisted of 55 deputy inspectors of vaccination and 695 vaccinators including probationers, and the number of operations performed by them rose from 1,044,468 to 1,092,559. In addition to this, the medical subordinates attached to the local fund hospitals and dispensaries vaccinated 18,885 persons or 3,186 more than in the previous year. The total number of operations was thus 1,111,444, of which 983,491 were successful; while in the previous year 1,060,167 operations were performed and of these 937,996 were successful; but the percentage of success was 88 in each year. The cost of each successful operation by the local boards' vaccinators fell from As. 3-9 to As. 3-7. Animal lymph was, as in previous years, exclusively employed.

Sanitation.

47. The expenditure on sanitation rose from Rs. 4,77,867 to Rs. 4,99,429, the increase occurring chiefly under conservancy establishments and miscellaneous sanitary arrangements.

Education.

48. Information regarding the progress of education in local fund areas has been furnished in Chapter VII.

Tanjore District Board Railway.

49. The balance in favour of the Railway Guarantee fund in the Tanjore district at the beginning of the year was Rs. 14,79,000 in Government securities and Rs. 1,95,425 in cash. The gross earnings from the working of the Tanjore District Board Railway during the year were Rs. 2,97,287, and a sum of Rs. 1,79,975 was realised, being the balance of the loan raised by the district board in the open market towards the cost of the extension of the railway and the purchase of the Government share thereof. The working expenses of the line amounted to Rs. 1,63,106, and a sum of Rs. 6,09,501 was spent on its extension. In addition to these amounts a contribution of Rs. 14,758 was paid to provincial funds, being half the net earnings of the railway for the quarter ending 31st March 1901. The net profit derived by the district board from the working of the railway for the year ending 31st December 1901 amounted to Rs. 1,35,210 or 5·3 per cent. of the total capital outlay on the line. The balance in favour of this fund at the end of the year was Rs. 8,21,925 in Government securities and Rs. 6,17,660 in cash.

MUNICIPAL ADMINISTRATION—MUFASSAL. (1901-1902.)

[*Judicial and Administrative Statistics of British India, XVII—Municipalities, pages 314, 328, 344 and 349.*]

General.

50. As in the previous year, 60 municipalities were administered under the Madras District Municipalities Act, 1884. At the end of the year, the municipal councils of these towns had a total strength of 905 members, of whom 66 were

ex-officio councillors, 415 were nominated by Government and 424 were elected by the rate-payers and inhabitants, the numbers in the previous year being 63, 408 and 412 respectively. Including those elected, 194 members were officials and 711 were non-officials, while 206 were officials and 677 non-officials in 1900–1901. Classified according to race, the number of European and Eurasian members fell from 162 to 155 and the number of native members rose from 721 to 750. The municipal councils of Conjeeveram, Erode, Ellore, Chidambaram, Máyavaram and Srírangam consisted entirely of native members. The municipal councils held in all 1,660 meetings or 20 more than in the previous year, but the average attendance at each meeting fell from 8·7 to 8·6. The elective system of appointing councillors was in force in 57 municipalities or two more than in the previous year; of these 49 were divided into wards for electoral purposes, while in the remaining eight the councillors were elected by the town as a whole. One other municipality, namely, Chingleput, to which this privilege was extended did not exercise it during the year. The right of electing the Chairman was withdrawn from the Ellore municipal council, but it was restored to the Calicut council. As in the previous year, 37 municipal councils were in the enjoyment of this privilege.

Receipts.

51. The year opened with a balance of Rs. 9,54,682 against Rs. 10,06,982 in 1900–1901; and the current receipts advanced from Rs. 30,66,534 to Rs. 33,10,052, an increase, which occurred chiefly under taxes, loans and advances, being partly counterbalanced by a decline under grants from Government. The revenue from taxes and tolls rose from Rs. 18,07,154 to Rs. 18,46,218. The principal taxes levied were those on buildings and lands, the water and drainage tax and the tax on arts, which brought in an income of Rs. 8,79,703, Rs. 1,65,068 and Rs. 2,00,927 respectively, the corresponding figures for the previous year being Rs. 8,57,088, Rs. 1,53,750 and Rs. 1,95,956. The receipts from tolls fell from Rs. 3,97,944 in 1900–1901 to Rs. 3,93,665. The sum received as grants from Provincial funds fell from Rs. 1,34,093 in the previous year to Rs. 72,106—Rs. 28,770 for schools, Rs. 9,047 for hospitals and dispensaries and Rs. 34,289 for other purposes. Of the last-mentioned sum, Rs. 5,000 were paid to the municipal council of Ootacamund for the maintenance of roads and Rs. 2,000 to the municipal council of Cuddapah to improve their financial position. Loans of Rs. 25,000 and Rs. 8,000 respectively were taken from Government by the municipal councils of Bellary and Vániyambádi for expenditure on preventive measures in connection with plague. The municipal councils of Ádóni, Trichinopoly and Tuticorin borrowed Rs. 16,000, Rs. 26,000 and Rs. 50,000 respectively from Government for expenditure on their water-works, while the council of Ootacamund obtained a loan of Rs. 71,500 from Government and another of Rs. 13,500 in the open market for the construction of the Tiger Hill reservoir. Of the loan of Rs. 71,500 paid to Ootacamund, however, Rs. 40,000 were, after the close of the year, converted into a grant.

Incidence of taxation.

52. The average incidence of municipal taxation per head of the population rose from As. 15–1, including tolls, and As. 11–9, excluding them, in 1900–1901 to As. 15–6 and As. 12–2 respectively. Taxation including tolls was heaviest in Ootacamund (Rs. 4–14–7), Kodaikánal (Rs. 3–2–6) and Coonoor (Rs. 3–2–2) and lightest in Srívilliputtúr (As. 8–5).

Expenditure.

53. The total charges were Rs. 36,41,428 or Rs. 5,21,605 more than in the previous year, the increase being mainly under water-supply works and advances. The balance at the close of the year was Rs. 6,23,306.

Public works.

54. The outlay on public works rose from Rs. 9,96,604 to Rs. 11,32,323. Of this sum, Rs. 2,81,874 or 72·8 per cent. of the revenue from tolls were spent on the construction and repair of municipal roads. The construction of the Tiger Hill reservoir in Ootacamund and the scheme for the water-supply of Vizagapatam were in progress, and similar schemes for Coonoor and Tiruvannámalai were under the consideration of Government during the year.

Education.

55. Education in municipalities has been dealt with in Chapter VII.

Medical Relief and sanitation.

56. Each municipality had at least one hospital or dispensary, for the maintenance of which a contribution was generally received from local funds. The numbers of in-patients and out-patients treated in these institutions were 25,358 and 1,512,300, respectively, while in 1900–1901 they were 24,911 and 1,490,028. The cost of the up-keep of these institutions rose from Rs. 3,09,074 to Rs. 3,14,211.

The expenditure on conservancy was Rs. 7,50,966 or Rs. 35,925 more than in the previous year. Detailed information regarding medical relief, vaccination, sanitation and vital statistics has been given in Chapter VI.

57. The cost at which the several municipalities were lighted fell from Rs. 1,19,145 in the previous year to Rs. 1,13,184. **Lighting.**

58. The public debt due by the several municipalities at the end of the year was Rs. 18,58,638 and for the repayment of this sum a sinking fund of Rs. 77,420 had been formed. **Debt.**

MUNICIPAL ADMINISTRATION—MADRAS TOWN. (1901-1902.)

[*Administration Report of the Madras Municipality for 1901-1902; Judicial and Administrative Statistics of British India, XVII—Municipalities, pages 314, 329, 345 and 349.*]

59. The following is an abstract of receipts and charges of the Madras Municipality for the year 1901-1902. **Financial.**

Receipts.

	Rs.
Opening balance	3,63,133
Municipal rates and taxes	10,54,465
Revenue derived from municipal property, &c.	3,26,954
Grants and contributions	1,89,191
Miscellaneous	78,637
Extraordinary and debt	61,182
Advances recovered	1,03,280
	18,13,709
Grand Total ...	21,76,842

Charges.

	Rs.
Public works	8,94,339
Education	12,158
Sanitation and medical services	4,10,583
Miscellaneous municipal purposes	2,04,327
Supervision and management	97,532
Repayment of debt	69,050
Interest on loans	2,20,875
Advances recoverable	12,952
Refund of other than current collections ...	5,545
Discount	1,013
Pensions and gratuities	9,572
	19,37,946
Closing balance	2,38,896
Grand Total	21,76,842

60. The incidence of taxation per head of population fell from Rs. 2-4-6 in the previous year to Rs. 2-1-1. Rs. 50,000 were as usual contributed to Provincial funds for general purposes. The total receipts and charges amounted to Rs. 29,57,990 and Rs. 25,94,857 respectively in 1900-1901. The percentage of the expenditure incurred on supervision and management to the total revenue and receipts was 5·37. The amount paid under Pensions and gratuities fell from Rs. 10,075 in the previous year to Rs. 9,572.

61. During the year Government Promissory notes for the value of Rs. 91,800 were purchased at a cost of Rs. 88,810. The total amount at credit of Sinking fund at the close of the year was Rs. 15,46,600 in Government Promissory notes and Rs. 1,054 in cash, while the several loans aggregated Rs. 52,49,000. The amount of interest paid on the several municipal loans during the year was Rs. 2,20,875, against Rs. 1,99,997 in 1900-1901. **Debts.**

62. Lands were acquired for the improvement of Murugappa Mudali Garden street, Cosa Erusappen and Veera Chetty streets and for a lane for scavengers at the back of the houses in South Madah street and Tholasingaperumal Covil street. A culvert was constructed at the corner of Vencatesa Chetty street, fourth division, and a new road, called Moore's road, was opened across Benfield Esplanade, connecting Fraser's road near Popham's Esplanade with the General Hospital road near the Memorial Hall, at the cost of the South Indian Railway, owing to the great inconvenience felt by the public by the constant locking of the gates at the level crossing on Benfield Esplanade and the General Hospital road. The out-patients' ward in the Royapettah Hospital was altered and extended. Two incinerators and a dead-house and a culvert for the cholera sheds in Perambore were constructed; an engine shed was constructed and an electric lighting installation provided for the Moore Market. Five additional beef-stalls were added to the Moore Market and a separate shed for selling beef and pork was built at the Smithfield Market. The open latrine in the Chulai Cart-Depot was altered into a **New works.** Communications. Buildings.

tray-latrine of the new pattern. Two tiled sheds with teakwood gate-shutters in the cart-stand in Elephant Gate Bridge road were erected. An incinerator of Harrington's pattern was constructed in Kistnampet, but has not yet been taken over for use.

Drainage. There were 16,824 feet of cast-iron main sewers laid during the year in connection with the new scheme of drainage. The laying of stoneware sewers together with house connections and ventilators in Hall's, Boodhi Begum and Azeez-ul-mulk's parcherries was commenced and completed during the year. At Purasawakam a new sewer of 12" and 9" cement pipes was laid along the High road from Vedavinayagar road to Saravanaperumal Coil street. This sewer now takes off the sewage that hitherto flowed into a tank in the latter street. An engine-house at the Ice House road pumping-station is under construction and the machinery is under erection. The opening out of a new street from the Wallajah road through Chetty's Garden to Pycroft's road and another from Waller's road through Narasingapuram to the Napier Park is also in progress. Owing to the great difficulty felt in cleaning the manholes situated between both the Madras and

Water-supply. South Indian Railway lines on the North Beach road, the construction of a new sewer outside the limits of the two railways was commenced and is in progress; its cost is to be borne by the railway companies. During the year, 1,019 yards of new pipes for supplying water were laid and 10 fountains, 1 valve, 12 stop-cocks, 7 hydrants and 56 meters were fixed.

Repairs to public works.

63. The length of metalled roads reformed was 35·55 miles and 7 furlongs of unmetalled roads were metalled for the first time, the corresponding lengths in the previous year were 23·17 miles and 360 yards respectively. The cost, exclusive of rolling, was Rs. 91,762 or about Rs. 2,581 per mile; in the previous year the cost was Rs. 2,565 a mile. The Black Town and Bauliah Naidu dispensaries, the new quarters acquired for the Hospital Assistant, Royapettah hospital, the Municipal Office permises, the Balija and Brahmin chatrams in the Hindu burial-ground, first division, the choultry in the DeMellow's road burial-ground, the

Communications. Buildings.

Drainage. Perambore bullock-slaughter-house and some latrines were repaired. The cross drains both in Cundappah Mudali High road, Purasawakam, and at the junction of Royapettah High road and Veeraperumal Mudali street and the side drains in Johni John Khan Bahadur street were repaired. Some repairs were also done to sewer No. II and to the iron gratings in China Bazaar road, and the drain in Malay

Water-supply. Perumal street was covered with granite stones. During the year 174,594 feet of water-supply pipes were taken up, cleaned and relaid. On the 1st April 1901 the level of the Red Hills lake stood at 35·73 and on the 31st March 1902 at 40·40. On the 2nd April 1901 the level fell to 35·68 and pumping had to be taken in hand and maintained up to 13th November 1901, when owing to rainfall the level rose. The quantity of water supplied to the city rose from 534,865,815 cubic feet in 1900–1901 to 588,280,155 cubic feet.

Education.

64. In the year under report the amount spent on education was Rs. 12,158, made up of Rs. 10,363 disbursed under various grants, Rs. 583 for maintenance of two municipal Panchama night-schools, Rs. 1,140 for establishment, and Rs. 72 for contingencies. There were 11 secondary schools with 2,273 pupils and 140 primary schools with 8,865 pupils at the close of the year.

Medical Relief.

65. The cost of maintenance of the Triplicane hospital, Black Town dispensary and Bauliah Naidu dispensary increased from Rs. 11,406, Rs. 5,112 and Rs. 2,281 in the previous year to Rs. 13,256, Rs. 7,215 and Rs. 2,303 respectively, and the patients treated in them numbered 30,306, 54,200 and 27,817 respectively. Rs. 20,000 were as usual contributed to Provincial funds on account of hospitals. The amount paid for the Medical College fell from Rs. 9,512 in the previous year to Rs. 7,178. The monthly grant of Rs. 66–10–8 and the annual grant of Rs. 300 were paid to St. Thomé dispensary, in addition to the monthly grant of Rs. 20 to St. Thomé Convent and the annual grants of Rs. 500 to Victoria Gosha hospital and Rs. 620 to the Sembiam dispensary.

Vaccination.

66. The total number of cases vaccinated rose from 32,571 in 1900–1901 to 38,265, and the percentage of success was 88·05, which is 3·64 below that of 1900–1901. The number of children under one year of age vaccinated increased from 13,687 in the previous year to 15,610. The amount spent on vaccination fell from Rs. 11,270 to Rs. 11,404, and the cost of each successful case from As. 6–6 to As. 5–5.

67. The number of births registered fell from 20,672 in the previous year to 18,872, and the ratio per mille per annum from 40·5 to 37·0. The number of deaths registered rose from 20,937 in the previous year to 28,031 and the ratio per mille from 41·1 to 55·0. **Births and deaths.**

68. The amount spent on conservancy was Rs. 3,37,585 or Rs. 4,548 more than in 1900–1901. **Conservancy.**

69. The cost of maintaining the lamps during the year fell from Rs. 60,814 in 1900–1901 to Rs. 55,706. During the year, 61 additional lamps were erected, making a total of 5,950 on 31st March 1902. **Lighting.**

70. The total cost of maintaining the People's Park, Napier Park and Robinson Park was reduced from Rs. 26,379 in 1900–1901 to Rs. 25,609. **Parks.**

71. The total cost of maintenance of the steam and manual fire engines fell from Rs. 7,481 in the previous year to Rs. 7,475. There were 12 fires during the year. **Fire.**

MILITARY (VOLUNTEERING). (1901–1902.)

72. Four additional companies of volunteers were formed during the year. An additional company of the South Indian Railway Volunteers was formed at Manaar in Travancore State; the Travancore Darbar has issued a perpetual permit for the passage into Travancore territory of arms, accoutrements and ammunition required for this company. Two additional companies of the Madras Railway Volunteers—one at Waltair and the other at Bezwada—were formed and a reserve company formed at Perambúr was attached to the Madras Railway Volunteers. In spite of the formation of these additional companies the number of extra-efficients and efficients fell from 4,347 and 1,997 to 4,127 and 1,835, respectively, the figures for the year 1900–1901 being adopted as far as the Coorg and Mysore Rifles and the Malabar Volunteer Rifles are concerned as these corps have not been inspected for 1901–1902 at the time of report. The decrease was particularly marked in the Bangalore Rifle Volunteers in which the numbers of extra-efficients and efficients fell from 1,010 and 318 to 661 and 257. There was a slight fall in the number of the Madras Artillery Volunteers. In the Southern Mahratta Railway Volunteers the number of extra-efficients rose by 61 to 559, but the number of efficients fell by 97 to 278; the strength of the Nilgiri Volunteer Rifles remained stationary, and in other corps the numbers increased.

MARINE. (1901–1902.)

73. The provisions of the Indian Ports Act (X of 1889) were extended to the ports of Covelong, Chingleput district, and Thekambagam, Malabar district, and certain port rules were made applicable to them. The limits of the ports of Malpe, South Canara district, and Azhikal, Malabar district, were altered. Rules regulating the landing and shipment of explosives in the port of Madras, revised rules regulating the grant of licenses to possess or transport petroleum in the Madras Presidency, rules regulating the importation, possession, sale and transport of carbide of calcium and certain rules regarding the payment of salvage fees were brought into force. The schedules of fees were revised in some ports. The dredger *Connemara* at Cocanada removed 61,720 tons of silt at an average cost of 1 anna 6 pies a ton; a new dredger, the *Coromandel*, was erected during the year; the construction of an iron screw pile wharf was begun. The salt creek below the tidal lock at Masulipatam and the sand-bank channel at Pámban silted up considerably. The accumulation of silt in the river bed at Negapatam afforded ample work for the dredger *Havelock* which removed 20,560 tons at an average cost of 3 annas 6 pies a ton; the erection of a goods shed was begun. The new quarters for the Port Officer at Cochin were completed. The dredger *Priestman* at Tuticorin was repaired and removed 11,934 tons of silt at an average cost of Rs. 5–0–2 a ton. A masonry shed was erected for the port boat at Tellicherry. The boat jetty at Cannanore was abandoned. The pier at Mangalore was completed and opened for passenger traffic; a passenger shed was under construction. The number of boats maintained in serviceable condition in coast-ports fell from 1,893 to 1,58[illegible]. **Ports.**

Traffic and Trade.

74. Excluding men-of-war and ships belonging to Government, 631 vessels having a gross tonnage of 1,202,114 tons called at Madras and 23,913 vessels having a gross tonnage of 5,561,890 called at other ports. Seventy-one foreign vessels called at Madras and 761 at other ports. The largest passenger traffic was carried on at Tuticorin, where 85,255 passengers arrived and 83,281 departed. The numbers of arrivals and departures at Negapatam were 18,079 and 34,953 and at Madras were 27,832 and 24,080, respectively; the passenger traffic was large at Pámban, Cocanada and Devipatam (Madura district) also. The value of imports at Madras rose from Rs. 7,34,39,935 to Rs. 7,40,97,551 but the value of exports fell from Rs. 5,85,18,148 to Rs. 4,98,28,356, the net result in duty being an increase from Rs. 28,44,669 to Rs. 31,33,346 excluding the duty on salt. The values of imports and exports at other ports rose from Rs. 6,54,90,590 and Rs. 10,95,11,952 to Rs. 6,87,70,682 and Rs. 11,56,63,012 respectively, and the duty rose by 74 per cent. from Rs. 7,21,268 to Rs. 12,52,537, excluding the duty on salt. Tuticorin is the most important coast-port; the value of the imports and exports at Tuticorin were Rs. 1,22,28,600 and Rs. 2,21,47,748 respectively; the value of imports at Cochin (Rs. 1,46,04,106) was higher than at Tuticorin, but the value of exports (Rs. 1,65,63,881) was less than at Tuticorin. The other ports at which the value of the trade exceeded one crore of rupees each, are Calicut, Cuddalore, Cocanada, Mangalore, Tellicherry and Negapatam.

Wrecks and Casualties.

75. In April 1901 a severe cyclonic storm, which formed in the Arabian Sea, struck the west coast, causing considerable damage to the shipping at the ports of Calicut, Tellicherry and Cannanore; several native craft were lost. On the 14th October a storm of considerable intensity occurred at Cocanada and caused several accidents to boats lying outside the harbour. The number of shipping casualties throughout the year was 35, the number in the previous year having been 16. Two of the wrecked vessels were steamers which stranded but were refloated in a few hours with the aid of their own engines at high tide; the others were country craft, the burthen of which varied from 16 to 150 tons each; twenty-two of them became total wrecks and nine lives were lost.

Lighthouses.

76. A new cement tower was erected at Cochin. A new column was completed at Pulicat. The lighthouse columns at Pámban, Armeghon and Vakalapudi were thoroughly repaired. The column, etc., at Sacramento were completed. New lights with French burners were exhibited at Cochin, Pámban, Pulicat, Havelock Point (Kistna) and Vakalapudi and the lighthouses at Armeghon and Sacramento were prepared to receive new lights. A new tower was erected at Masulipatam and the light and apparatus belonging to Point Divi, the light on which was discontinued from 1st May 1901, were installed there. All lights on the coasts of the Presidency were exhibited without interruption.

Financial.

77. The port dues at Madras amounted to Rs. 68,950 and at coast-ports to Rs. 2,69,793 in the aggregate. The transactions of the year in the Madras port resulted in a small surplus of Rs. 8,183, the receipts (excluding the opening balance) having been Rs. 1,13,992; the year's surplus of the Madras Pilotage fund, amounting to Rs. 4,159, was added to the Port funds and Rs. 30,000 was paid to the Harbour Trust Board; at the close of the year the surplus to the credit of the Port funds was Rs. 28,252 in addition to Government securities of the value of Rs. 50,000. In the eastern group of coast-ports the expenditure (Rs. 2,60,279) exceeded the receipts by Rs. 52,966; this was largely due to expenditure on lighthouses. Contributions and surpluses of other marine funds amounting to Rs. 39,978 were adjusted to the credit of this group. Government securities having a nominal value of Rs. 1,86,100 were sold, and a sum of Rs. 23,200 was borrowed from the western group Port fund; the result of all these transactions was that at the close of the year the eastern group Port fund had a small surplus of Rs. 91 and that the whole debt due to the western group Port fund was Rs. 1 20,900. The receipts in the western group of coast-ports exceeded the expenditure (Rs. 1,14,129) by Rs. 9,777. Government securities having a nominal value of Rs. 1,64,400 were sold; contributions and surpluses of other marine funds credited to this group amounted to Rs. 924. Rs. 1,6 2 were contributed to the Calicut pier, Cochin and Mangalore Pilotage funds, Rs. 23,200 were lent to the eastern group Port fund, and Rs. 11,200 to the Landing and Shipping dues fund at Mangalore to meet expenses incurred on account of the reclamation of the foreshore and the

execution of the pier. At the close of the year the surplus to the credit of the fund was Rs. 1,33,758 in addition to Government securities having a nominal value of Rs. 1,31,600 and debts due to the fund amounting to Rs. 1,32,100. On account of the substitution of an iron screw-pile jetty for the wooden jetty at Cocanada, the transactions of the Cocanada Landing and Shipping dues fund resulted in a deficit of Rs. 24,761 which was partly met by a contribution of Rs. 14,554 from Cocanada wharfage-fees. Pier-tolls resulted in surpluses except at Calicut. The surpluses were transferred to clear deficits in other funds.

MISCELLANEOUS.

78. During the year 1901, 187 old licenses for the possession of sulphur were in force and 35 new licenses were issued; of the latter 13 were issued in Trichinopoly. The total number of licenses in force was therefore 222, the number in force in 1900 having been 214. The quantity of sulphur covered by the licenses was about 989½ tons, but the balance in the Presidency at the beginning of the year was nearly 143 tons; during the year 249 tons were imported and 290¾ tons were sold, and the balance on the 31st December 1901 was 101¼ tons. Although the largest number (28) of licenses were in force in Malabar, the most important transactions occurred in Madras where the opening balance of sulphur was 63¾ tons, 126¾ tons were purchased or imported and 152 tons were sold. **Sulphur. (1901.)**

79. The number of licenses issued under the Indian Arms Act, 1878, and the rules made under it rose from 78,616 in 1900 to 79,626, but the number of licenses to possess arms and ammunition and to go armed for purposes of sport, protection or display fell from 67,116 to 67,060. The increase in the number of licenses to possess and transport gunpowder and fuses for *bonâ fide* blasting purposes from 9,954 in 1900 to 11,101 occurred almost wholly in the two districts of Madura and Coimbatore and is attributed to the increased use of explosives in sinking and deepening wells on account of the drought. Inspections of licensed shops continued to be on the whole satisfactorily performed. The number of prosecutions instituted under the Indian Arms and Explosives Acts fell from 1,116 in 1900 to 947, but the percentage of cases which resulted in convictions declined from 84·9 to 76·7. **Arms. (1901.)**

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

AGRICULTURE. (1901–1902.)

Scientific and local enquiry under Provincial direction.
Experimental farms.

1. The starting of two experimental farms was sanctioned about the end of the previous year, one at Bellary and the other at Koilpatti in Tinnevelly district. The sites were selected and the land required was acquired during the early months of the year, that at Bellary being obtained first. Work began there in June 1901, and fair progress was made during the year towards the completion of the necessary buildings and in other matters connected with the laying out of the farm. Trial crops were grown on the experimental plots, but their outturn showed such considerable variations that it is considered advisable to await another year's results before attempting comparative experiments. Meanwhile from the crops grown, specimens of definite varieties of sorghum and cotton have been obtained. At Koilpatti the land was not obtained till a little later and the progress made was slower than at Bellary, but the field work was equally advanced at the end of the year. The main plots for future experimental work were laid out and were all sown with cumbu (*Pennisetum typhoideum*). The results were even more irregular than at Bellary. This farm consists of two blocks, one of red soil, in which there are several wells, and the other of black soil; a good deal of the latter was in foul condition when taken over, and is in process of cleaning. On some of this black soil, besides the cumbu mentioned above, cotton was sown, from which seed of recognisable varieties was selected. Another portion was sown with white cholam from Bellary, but the crop failed. On the red soil block, a considerable portion was sown with horsegram and the rest with a variety of crops. The most interesting results were obtained with the peculiar "Irungu" cholam of the south, of which a number of varieties have been separated for future investigation and with groundnuts—a new crop in the locality.

Fibre plants.

2. In order to obtain some definite information as to the rate and cost of production of the various agaves, the value of which as fibre plants has recently come prominently to public notice, a small area of land was taken up near Hindupur in Anantapur district and 27,000 plants, including 13,920 *Agave Vivipara*, 6,325 *Agave Americana*, 6,225 *Agave Sisalana* and 540 *Fourcroya Gigantea*, were put out in various methods there. The *Agave Sisalana* plants were obtained partly from the Madras and Bangalore gardens and partly from Poona: the *Agave Vivipara* from Dharwar. Of the plants set out, about 4,800 have died, and the remainder were doing fairly at the end of the year. The only expense at present incurred is for a watchman, but it is desirable that the area should be considerably increased if plants can be obtained.

Sugarcane.

3. On the recommendation made to Government to appoint a committee of experts to investigate the sugarcane-disease prevailing in Gódávari district, as to the cause and method of propagation of which there were differences of opinion, it was decided towards the end of the year that a further scientific investigation of the precise nature and mode of propagation of the disease should be made by the Government Botanist, and, to enable him to carry on the investigation, sanction to start an experimental station was granted and a block of land, the lease of which was obtained for the purpose at Samalkot, was planted up under the personal supervision of that officer, a plan of action having been settled by him in communication with the Deputy Director.

Botany.

4. The Government Botanist was engaged primarily to carry on the systematic botanical survey of the Presidency as part of such survey of the whole of India. Experience has, however, demonstrated that the work of economic research is much more important and urgent, and will afford constant occupation to a special officer. It has therefore been decided to make the appointment, which was originally sanctioned as a temporary one for five years, permanent. The Government Botanist will now become one of the staff of the Agricultural department as expert adviser on economic botany. In connection with the botanical survey of India, the Government Botanist visited a portion of the hill tracts of Tinnevelly district in May to July 1901, and at the request of the Forest department he visited the Anamalai hills in October and November. Collections of grasses were made at various places and special attention was devoted to forest trees. The total number of plants collected in the year was larger than in any previous year. Over 4,000 sheets of specimens were mounted. The Government Botanist continued his investigation of the damage caused to the date-palm by beetles and also devoted attention to the mode of tapping and to the general life of palms in Gódávari district, on which an interesting report was submitted after the close of the year. He also paid some attention to a pepper-vine disease in the Wynaad, to investigate which the planters have desired the deputation of an expert. The work of collecting specimens of articles for the Imperial Institute was proceeded with. Revised lists of products previously indented for and not supplied and of new products were received from the Reporter on Economic Products during the year and necessary instructions were issued to Collectors and other officers for the collection of the articles required. Specimens of twelve articles were forwarded during the year.

Veterinary Science.

5. No Superintendent, Civil Veterinary department, was on duty for about six months, and very little progress was made during the year; but the upper subordinate staff was reorganized and the remaining stock inspectors, who were not considered fit to hold the post of veterinary assistant, were pensioned. Two pony-stallions were destroyed during the year, leaving twelve at work, 8 in Coimbatore and 4 in Salem. The average number of mares covered by each pony rose from 29 to 35·4. Of the 407 mares covered in the previous year 221 were found to be empty and the results in 83 cases were not ascertained. The remaining 103 include mares which aborted. There were 4 donkey-stallions; the average number of mares covered by each rose from 23 to 24. The number of entire ponies castrated were 56 in Coimbatore and 78 in Salem, while 47 and 127, respectively, were castrated in the previous year. The Cattle Diseases Act (II of 1866) was put in force in 21 places in Tinnevelly district in connection with large cattle-fairs. The Glanders and Farcy Act, which had been introduced into Madura district in the previous year, continued in force up to November, when it was withdrawn owing to the want of a professional Superintendent. During the whole period that the Act was in force 45 animals were destroyed. The Veterinary Hospital was not well attended during the first half of the year, but the attendance improved subsequently. The total number of cases treated has steadily increased from 804 in 1899–1900 to 856 in 1900–1901 and 867 in 1901–1902.

Bulletins.

6. Two bulletins were published during the year; one related to the tea-eel worm disease in South India and the other to the sugarcanes of Madras.

Agricultural Education.

7. The recommendations submitted to Government in regard to primary education in agriculture continued under the consideration of Government. The question of giving some instruction in agriculture to minors under the Court of Wards was also under consideration. An instructor on Agriculture and Botany to the minors at Newington has been sanctioned and arrangements have been made for the practical instruction of the wards in classes at the College of Agriculture, Saidapet. The College of Agriculture is administered by the Educational department and some account of it will be found in chapter VII, paragraph 40 (page 235).

WEATHER AND CROPS. (1901-1902.)

Rainfall.

8. The number of stations at which rainfall was recorded rose by 4 to 427 including 61 in native States; of these stations 329 were inspected during the year. The year opened favourably throughout the Presidency, except in the Carnatic and North Arcot districts, where the rainfall was much below the average. The south-west monsoon rains were not encouraging and were less than the average expected in the Circars and Deccan as also in North Arcot. The rainfall in June was deficient in almost all the districts of the Presidency, except Kurnool, Bellary, South Arcot, Tinnevelly, the Nilgiris and West Coast, but the fall in the following month was generally better and exceeded the average in some districts; in portions of the Circars, Deccan, Central and Southern districts it was, however, less than the average. The August rains were also inadequate in the Circars, except Gódávari, scanty in portions of Deccan, Nellore and the Central districts except Trichinopoly. This caused some anxiety in respect of a large area of the Presidency, which was, however, removed partly by the generally good rains of September and to a large extent by the north-east monsoon which was favourable in November over a great portion of the Presidency, though the rainfall in the month of October was not up to the average in several districts. There was also heavy rain in December in the Carnatic and North Arcot and good rain in January in the southern half of the Presidency. On the whole the rainfall was deficient in the Deccan, North Arcot, Nellore, and the Circars except Gódávari; in other districts it exceeded the average. The greatest deficiencies were in Kistna (8·4 inches) and Vizagapatam (8·1 inches). In the Nilgiris the rainfall (83·6 inches) was 20 inches above the average.

Rivers.

9. The Gódávari began to rise steadily on the 19th June and reached the maximum height of 6·8 feet over the crest of the anikat on the 11th August. The Kistna was in fresh on the 23rd May and rose to 11·55 feet over the crest of the anikat on the 16th August. The freshes in the Pennér were adequate and crops fared well under the delta on the whole. Owing to floods there were breaches in the Cauvery near Kumbakónam in July, and in minor rivers and branches, but only slight loss was incurred.

Cultivation.

10. The area of dry land brought under cultivation amounted to 18·92 million acres, and that of wet land to 5·03 million acres, the area being above the average in both cases. The increase was nearly 5 per cent. under dry and 4 per cent. under wet. As compared with the previous year, there was an increase in the dry area sown in all districts, except Gódávari, Kistna, Cuddapah, Tanjore and West Coast districts where there were small decreases. The increase was large in Bellary (49,000), Anantapur (151,000), South Arcot (79,000), Salem (68,000) and Coimbatore (64,000). There was increase also in the wet area sown, amounting to 126,000 acres. Kistna contributed the largest increase, viz., 39,000 acres. The total area under second crop dry showed a slight increase in the year as compared with the average, but a marked deficiency as compared with the previous year in which dry cultivation was abnormally large. Under second crop on wet land there was an increase of 152,000 acres as compared with the average and of 64,000 acres as compared with the previous year. The increase in the latter case was chiefly contributed by Chingleput (48,000 acres). The various fluctuations are due, in the main, to seasonal conditions *plus* a certain increase due to the growth of the population and improvement in irrigational facilities.

Outturn of Crops.

11. The figures showing the outturn of crops are based on the returns furnished by village officers; from these it appears that the outturns of dry and wet crops were fair on the whole. Twelve annas is taken to represent a normal crop. The outturn of the paddy crop was half the normal in Chingleput and Tinnevelly and was an eight-anna crop in Vizagapatam, Madura and Malabar; the outturn varied from three-quarters to normal crop in other districts, except South Canara where a fifteen-anna crop was obtained. The cholam crop was normal in no district, the best crops obtained being in Nellore and Trichinopoly, where the outturn was estimated to be ten annas; in Kistna, Chingleput, South Arcot and Madura the outturn was reported to be seven annas. The best cumbu crops were obtained in Gódávari, Bellary, Cuddapah and Trichinopoly, where the outturn was ten annas; in Kistna the outturn was so low as five annas

Paddy.

Cholam.

Cumbu.

and in Chingleput it was only half the normal outturn. A normal ragi crop was obtained in Bellary district only; in Vizagapatam the outturn was estimated to be half the normal and in Ganjám, Chingleput and Tinnevelly it was represented by seven annas. The horsegram crop was poor; the best outturn was three-quarters of the normal, which was obtained in Anantapur and Cuddapah. The best cotton crop was yielded in Vizagapatam, where the outturn was eleven annas; only half the normal outturns were obtained in Kistna and Kurnool. The outturn of indigo was normal in Salem; in Tinnevelly the outturn was reported to be five annas, and in Vizagapatam it was half the normal. The outturn of the sugarcane crop was ten annas or more in most districts; it was normal in Bellary, Anantapur and Cuddapah; in Malabar the outturn was estimated at five annas. On the whole the crops were poorest in Chingleput, Tinnevelly, Madura and Vizagapatam and best in Bellary, Tanjore and Trichinopoly.

Ragi. Horsegram. Cotton. Indigo. Sugarcane.

12. The portion of Cuddapah district which remained affected at the end of the previous year continued so till the end of June 1901 when all relief-operations were closed in the district, but they had to be reopened in August when, besides the area already mentioned, additional areas in the district became affected. Portions of North Arcot, Chingleput and Anantapur districts were also added to the affected area. The rainfalls in Anantapur (17·0 inches), Cuddapah (22·0 inches) and North Arcot (35·3 inches) were 5·8, 5·8 and 1·8 inches below their averages, but the rainfall in Chingleput (52·1 inches) was 7·1 inches above the average. In Chingleput, however, the crops were very poor, their outturn varying from five to seven annas each. The relief afforded extended to test-works only in Cuddapah and North Arcot districts. Relief at Government kitchens was given in all the four districts, and the weavers in Cuddapah were assisted at their own trade. The numbers relieved in all three ways were never great, and the highest figures reached during any one month were 5,355 on works, 2,798 in kitchens, and 3,099 weavers.

Scarcity.

HORTICULTURE.

13. The Government Gardens, Ootacamund, were kept in good order. The plants which were most conspicuous were: Tuberous-rooted Begonias, Chrysanthemums, Geraniums, Chinese Primulas, *Primula obconica*, *Streptocarpus Dunnii*, Camellias, *etc.* The nurseries were well-stocked with plants. The glass-houses were also well-stocked, but the accommodation was insufficient. The show of Chrysanthemums, Narcissi, Gladioli, Carnations, Dahlias, and Sweet Peas in the new nursery was excellent. Among the rarer species in the gardens which flowered during the year was *Doryanthes excelsa*, Correa. The plant is probably the finest individual specimen of this species in India. *Erica arborea*, Linn., and *Luculia gratissima*, Sweet, were both in fine flower in August and September. *Kerria japonica*, DC., also flowered during the year. It is a fine shrubby plant with bright yellow double flowers. *Strobilanthes gossypinus*, T. Anders., flowered at the end of 1901; the shrub, when it was in full flower, was covered with bluish purple flowers; it is now ripening its seeds. The Curator had never seen this species in flower before. Most of the species of Strobilanthes flower, as a rule, only once and then die. The oldest tree of *Araucaria Bidwillii*, Hook., in the gardens, produced matured seeds during the year for the first time; eleven seeds were sown and they have all germinated; the seedlings are still small, but are healthy and promising; this tree was planted in or about 1867. A good deal of planting was done during the monsoon. A number of plants of *Widdringtonia Whytei*, Rendle, were planted. Seeds of a fine species of Phœnix (*Phœnix Canariensis*, Hort.) were received in 1901, and several seedlings were raised from them. A one-ounce packet of seed of *Paspalum dilatatum*, Poir., a grass which has received much praise as a drought-resisting fodder plant, was received on the 23rd July 1901, the seed was sown on the 25th idem and germinated well; the seedlings were planted in trial plots at Ootacamund, at Sim's Park on the 28th October, and at Burliyar on the 17th December 1901; the plants are dwarf in Ootacamund, while at Coonoor and Burliyar they have grown well, flowered and seeded. A few thousands of seedlings of *Cinnamomum Camphora*, Nees and Eberm., the camphor tree, have been raised. Some seeds of *Brucea sumatrana*, Roxb., were sown and germinated well and the seedlings are healthy-looking. The progress

The Nilgiris.

made in the cultivation of the "Cape Gooseberry," *Physalis peruviana*, L., shows that this fruit can be improved both in size and flavour. A collection of fruit-trees was imported from England comprising varieties of apple, pear, peach, nectarine, plum, cherry, apricot, vine, gooseberry, red currant, black currant, white currant and raspberry. A small cake, half an ounce in weight, of rubber of *Plumeria cutifolia*, Poiret, and also 2 lbs. 15 oz. of the dried latex obtained at Burliyar from the fruit of the "jack" (*Artocarpus integrifolia*, Linn.), were sent to the Reporter on Economic Products to the Government of India.

Sim's Park.

14. In Sim's Park, Coonoor, a mixture of seeds including white clover, kidney vetch, yarro, burnet, chickory, ribgrass, crested dogs-tail, tall fescue and tall oat-grass was sown in a small plot of ground, which was dug over but not manured; the seeds germinated, but the seedlings with a few exceptions died, owing chiefly to the poverty of the soil and the unsuitability of the climate. The Sim's Park reserve, which is in close proximity to the park itself, was placed in charge of the Curator.

The Burliyar Gardens.

15. Nine pits in the Burliyar gardens were planted with cuttings of the best rubber-yielding trees on the 9th February 1902 and with seeds on the 6th March 1902 taken from the best rubber-yielding tree yet found at Bekki Kolley, Wynaad. This particular tree, which girthed 3′ 3″ at $2\frac{1}{2}$ feet from the ground, yielded 14 ounces of dry rubber after one tapping, which was made on the 30th January 1902. Eight pits, $26\frac{1}{2}$ feet apart, were planted on the 23rd February 1902, with both seeds and cuttings of the Kullar variety. A few seeds from a ceara rubber tree said to be 20 years old, and to have yielded 10 lbs. of rubber per annum have been sown, and should they germinate it is intended to plant a third line at Burliyar with the seedlings. Should this variety prove in due course to be a better rubber-yielder than the Bekki Kolley and Kullar varieties, a distinct advance will have been made in the work of selection, which has been undertaken.

Kullar.

16. A plot of ten acres of land in block IV of Burliyar reserve forest was selected on the 23rd May 1901 and the land was taken charge of in June and subsequently cleared. One hundred and thirteen young mahogany trees are growing on and scattered over the upper four-fifths of the clearing. Before being cleared they were growing in a forest of indigenous trees, bamboos and climbers which was becoming denser every year, and their growth was consequently being seriously interfered with; they have improved greatly in appearance since they were cleared. A small nursery has been opened in which a few different species of tropical plants have been planted. On the cleared area, which is free of mahoganies eight pits were planted in February 1902 with the Bekki Kolley variety of the ceara rubber tree and eight pits with the Kullar variety of the ceara rubber tree.

Miscellaneous.

17. The abandoned forest nurseries at Kullar and Benhope have been placed under the Curator for the growth of tropical plants such as Durian, etc. The numbers of fruit trees and of ornamental trees, shrubs and herbaceous plants distributed during the year rose from 528 and 4,920 to 592 and 5,948, respectively, but the number of timber trees distributed fell from 7,539 to 5,092. The numbers of packets of vegetable seeds and of other seeds advanced from 2,105 and 2,240 to 2,240 and 3,355. There was a slight increase (Rs. 31) in the receipts from the distribution of plants, seeds, etc. (Rs. 4,101). The total expenditure declined from Rs. 29,648 to Rs. 25,516.

Cinchona Plantations.

18. Cinchona plantations were maintained at Dodabetta, Nedivattam and Hooker. The season was favourable, but severe frosts did some slight damage to young plants on the Dodabetta estate. The area under cultivation in the old estates was 831·46 acres and the total area of the first three extensions on Hooker was 240 acres; the total expenditure on these areas was Rs. 51,032–0–9 or Rs. 47–10–0 an acre. The trees on the Dodabetta estate are improving year by year; trees were pruned on 54·66 acres and thinned on 27·74 acres. Eleven samples of bark which were analysed yielded from 6·02 to 13·9 per cent. of sulphate of quinine; the latter figure is probably a record in the quinine-yielding powers of *cinchona officinalis*. The crop harvested on the Dodabetta estate was 70,026 lbs. and the amount spent on it was Rs. 13,800; the cost of the bark was therefore As. 3–1·83 a lb. The Nedivattam estate was well cultivated during the year; the total expenditure on it was Rs. 13,633 and the crop obtained was 47,529 lbs. at a cost of As. 4–7·07 a lb. Fourteen acres of the Hooker estate were uprooted and 98 acres were looking well. The four extensions did well on the whole although the growth was rather uneven and a few young plants died. Taking both estates together, Rs. 18,483 were spent on

them; they yielded 96,194 lbs. of bark at As. 3-0·88 a lb. At Dodabetta the nurseries did well, 45,100 seedlings being supplied to the public, and 52,000 *officinalis* seedlings sent from Nedivattam to Hooker and 200,000 seedlings from the Hooker nurseries were put out in plant baskets ready to be planted out, and did well. The year's crop consisted of 154,044 lbs. of crown and hybrid bark and 12,176 lbs. of red bark; the total crop was 28,194 lbs. less than in 1900–1901. The cost of each pound of bark was As. 4–6·20. During the year 101,568 lbs. of bark were purchased for Rs. 38,421 at an average rate of As. 6–0·62 a lb. The total quantity of bark worked up at the factory was 275,000 lbs; 7,271 lbs. of quinine and 3,274 lbs. of febrifuge or 2·64 per cent. of quinine and 1·19 per cent. of febrifuge were extracted. The factory with the new machinery was opened for work in June, shale oil being used instead of fusel oil, but the machinery was found to be defective and it was not till steam-coils had been inserted in the extractors for the purpose of heating the shale oil that the full return of alkaloids was obtained. The quinine-barks cost Rs. 90,377–14–6 and their manufacture Rs. 17,422; on the whole, therefore, quinine cost Rs. 14–13–2 a pound, so that the cost of production of a pound of quinine has been cheapened by As. 4–5. The cost of febrifuge was reduced by As. 15–6 to Rs. 2–11–10. Quinine was sold to the Medical Stores at Rs. 16–5–4 a pound, the average price of Howard's quinine for the preceding twelve calendar months, and to hospitals maintained by local boards and municipalities, medical institutions in other provinces or in native States and to the public at Rs. 14 a pound. Febrifuge was sold at Rs. 10 a pound to medical depots and hospitals and at Rs. 12 a pound to the public. The total amount of quinine issued rose from 10,285 lbs. in 1900–1901 to 11,978 lbs., but the quantity of febrifuge issued fell from 3,588 lbs. to 2,426 lbs. The sale of quinine powders by revenue officials was continued in eight districts and was about equal in quantity to the sale in the previous year. The pice-packet system was extended during the year to the Imperial post-office of Mysore State. Within the Presidency the sales under this system rose from 8,972 packets of 102 five-grain powders each to 9,502½ packets. The cash receipts during the year were Rs. 1,93,088 or Rs. 15,987 more than the receipts in the previous year; those receipts include the realization of Rs. 12,242 outstanding at the beginning of the year; the amount outstanding at the close of the year was Rs. 18,203, of which Rs. 14,209 were due from the Bombay Government. The expenditure on the head-office and plantation was Rs. 58,939 and that on the factory was Rs. 71,102, including the cost of purchased bark. The value of stock fell from Rs. 3,90,822 to Rs. 3,17,989. This is partly due to a diminution in the cost of production, but the stock of quinine was reduced by 4,703 lbs. The balance-sheet showed a loss of Rs. 7,294.

19. The Agri-Horticultural Society, Madras, had 106 members, three honorary and nine extraordinary members on its rolls on the 31st March 1902. Persons of any nationality are eligible for membership. The total expenditure during 1901–1902 amounted to Rs. 12,412, of which Rs. 4,000 were paid by Government. **The Agri-Horticultural Society.**

FORESTS.

(1st July 1901 to 30th June 1902.)

[*Annual Administration Report of the Forest Department of the Madras Presidency for the twelve months ending 30th June 1902.*]

20. The increase in the area of reserved forests from 16,589 square miles to 17,154 square miles arose from the reservation of 468 square miles under the Forest Act and the addition of 141 square miles due to a more correct computation of the areas already notified. The increase was, however, partly counterbalanced by the exclusion of 3 square miles by disafforestation and 41 square miles by a more accurate computation of the areas notified in previous years. There were added to the reserved lands 112 square miles by the notification of new areas and 15 square miles by a more correct computation of lands already notified. On the other hand, 189 square miles were excluded at settlement or unreserved to provide for extension of cultivation and for the exercise of communal privileges. Ten square miles were deducted on account of revision of areas and 468 square miles were transferred to reserved forests. The result was that the total area of reserved lands was reduced from 2,952 square miles to 2,412 square miles. **Area.**

Settlement.

21. At the commencement of the year 318 blocks covering 1,873 square miles remained to be finally constituted reserved forests, and 38 blocks with an aggregate area of 287 square miles were added during the year, making a total of 356 blocks with an area of 2,160 square miles. Of these, 112 blocks with an area of 468 square miles were constituted reserved forests, and 3 blocks covering an area of nearly about half a square mile were abandoned. There was a decrease in the number and area of blocks notified under section 4 of the Forest Act mainly on account of the completion of the work of reservation in several districts prior to the year under report. At its close 241 blocks with an area of 1,642 square miles were under settlement; but of these, 107 blocks covering 795 square miles have been practically settled leaving only 134 blocks with an area of 847 square miles still under settlement enquiry, in Kurnool and North Coimbatore. The number of blocks settled and reported on fell from 81 with an aggregate area of 581 square miles in 1900–1901 to 54 with an aggregate area of 500 square miles, and the area settled and not reported on fell from 468 square miles in 53 blocks to 295 square miles in 53 blocks; the outturn was smaller during the year than in 1900–1901, as only two Special Forest Settlement-officers were employed, whereas in the latter year, three were engaged throughout and two others for some months. The area remaining to be finally constituted reserved forest at the commencement of the current year was 1,642 square miles, and, adding to this about 400 square miles of reserved land likely to be brought under settlement in the near future and 203 square miles of new selections, there were 2,245 square miles for final settlement. Out of these, 795 square miles have been practically settled by the Forest Settlement-officers. Surveyors were employed in five districts in the survey of the boundaries of proposed reserves and in the alignment of ghât-roads.

Demarcation.

22. The length and cost of boundary lines preliminarily demarcated fell from 561 miles and Rs. 1,808 in 1900–1901 to 400 miles and Rs. 862; the average cost per mile was therefore reduced from Rs. 3–3–5 to Rs. 2–2–6. The total outturn of work in the Presidency was smaller than in the previous year, as the selections were nearly complete in most districts. The length and cost of boundary lines permanently recleared and demarcated rose from 1,968 miles and Rs. 21,691 in the previous year to 2,036 miles and Rs. 23,843 in 1901–1902, and the average cost per mile advanced from Rs. 11–4–4 to Rs. 11–11–4. The length of line recleared was 4,450 miles at a cost of Rs. 5,843 in 1901–1902, while it was 2,522 miles at a cost of Rs. 6,115 in the previous year. The length cleared by Forest subordinates free of cost declined from 3,955 miles in 1900–1901 to 3,821 miles.

Surveys.

23. As in previous years, the combined Nos. 9 and 19 Parties, Survey of India, were divided into four sections, each under the immediate charge of an officer of the Provincial service. As in the year 1900–1901, their work was confined to the districts of Kurnool, Cuddapah, South Canara and North Coimbatore. The area surveyed by triangulation rose from 1,335 square miles in the previous year to 1,680 square miles owing to the employment of an extra triangulator, but the areas surveyed by traversing and topography declined from 771 miles and 1,378 square miles in 1900–1901 to 414 miles and 1,306 square miles respectively, the former owing to the uncleared state of the boundary lines in South Canara and the latter to the density of the forest in Cuddapah, where the chain had to be extensively used. The aggregate area of reserved forests surveyed by topography during the year was 937 square miles, and 11 sheets of Kurnool district and 34 of Cuddapah have been forwarded to Dehra Dun for publication. The actual expenditure during the year, including cost of instruments, fell from Rs. 93,335 in 1900–1901 to Rs. 91,625. The total cost debitable to the Forest department, after deducting the contribution of the Government of India, amounted to Rs. 62,125 or Rs. 6,323 less than in the previous year. The decrease is reported to be due to the debit of a portion of the pay and allowances of the staff engaged in work for other departments to those departments. The average cost of triangulation and traversing (Rs. 8·3 per square mile) was slightly lower than in the previous season and that of topography (Rs. 58·8 per square mile) a little higher. Surveys were carried on departmentally in five districts and 10,346 square miles were finally mapped out of the total area of 17,154 square miles of reserved forests.

Working-plans.

24. Working-plans for 1,613 square miles were sanctioned by the Board of Revenue during the year and plans for 1,894 square miles were under preparation at its close. This is a marked advance on the previous year's outturn, which was 658

square miles under sanctioned plans and 1,061 square miles under preparation. The amount spent on the work was Rs. 2,282.

Communications and Buildings.

Roads, etc.

25. The amounts spent on roads and bridges, buildings and other works rose from Rs. 32,483, Rs. 42,377 and Rs. 6,960 in 1900–1901 to Rs. 54,010, Rs. 48,837 and Rs. 10,991 respectively. There were 52 miles of new roads and paths constructed at a cost of Rs. 30,475; the expenditure on new buildings amounted to Rs. 26,508.

Tramways.

During the year, there were $2\frac{1}{2}$ and $8\frac{1}{2}$ miles length of tramway in the Sríharikóta and Coast ranges respectively in Nellore district. In the former the aggregate weight carried rose from 3,450 tons or 8,626 ton-miles in the previous year to 9,460 tons or 23,650 ton-miles; but in the latter range the aggregate weight carried fell from 10,434 tons or 21,881 ton-miles in 1900–1901 to 5,523 tons or 13,561 ton-miles. The trams continued to be worked by handpower. In South Coimbatore the total quantity of timber trammed rose from 39,832 cubic feet in the preceding year to 48,546 cubic feet, of which 12,951 cubic feet were drawn by Government bullocks.

Breaches of Forest Laws.

26. The number of forest offences reported during the year rose from 22,130 in 1900–1901 to 23,750, the increase being particularly marked in cases of unauthorized felling etc. (1,090) and illicit grazing (573); the number pending at the close of the year advanced from 3,688 on 30th June 1900 to 4,129. As usual most of the cases of incendiarism remained undetected. The number of cases disposed of during the year were 23,376, or 1,809 more than in 1900–1901; in spite of the total increase the numbers of cases, which were undetected or withdrawn for other reasons, fell from 1,181 and 1,658 to 974 and 1,493; the number of cases which were compounded rose by 1,423 to 13,827; of the remaining cases, in which prosecutions were instituted, 6,380 ended in the conviction of the accused and 702 in their acquittal, the percentage of acquittals to cases prosecuted falling from 10·25 in 1900–1901 to 9·91. As a general rule only cases involving serious offences were taken into court, while petty offences for which there was sufficient proof were compounded. The total amount realised as compensation rose from Rs. 80,029 in 1900–1901 to Rs. 97,428, and the average amounts of compensation settled in each case and paid by each accused advanced from Rs. 6–7–3 and Rs. 2–12–5 to Rs. 7–0–9 and Rs. 5–12 respectively.

Protection from fire.

27. There was an increase of 332 square miles in the total area (5,550 square miles) which it was attempted to protect. The total cost was Rs. 38,138 or Rs. 3,932 in excess of the total cost in the previous year and the average cost of protecting a square mile rose from Rs. 6–8–11 to Rs. 6–13–11, but the percentage of the protected area which escaped fire fell from 97·39 to 96·37.

Grazing.

28. The total area of reserved forests and reserved lands rose from 19,541 to 19,567 square miles. The area closed to goats only and that closed to sheep and goats advanced from 17,303 square miles and 604 square miles in 1900–1901 to 17,375 square miles and 797 square miles respectively. During 1901–1902 1,727 square miles were closed to all animals during the whole year and 492 square miles for a portion of the year, the corresponding areas in 1900–1901 being 1,637 and 279 square miles, respectively. The area open to all animals fell from 1,626 square miles to 1,394 square miles, special concessions being granted in certain districts on account of the prevalence of scarcity. The animals grazed under licenses during the year included 133,002 buffaloes, 1,354,331 bulls and cows, 2,155,843 sheep, 300,069 goats and 498 other animals, the corresponding figures in the previous year being 128,884, 1,300,118, 1,361,947, 135,704 and 1,217; the satisfactory increase of 835,873 in the number of animals grazed under licenses is ascribed to improved supervision and to increased recognition by the people of the wisdom of taking out permits. The numbers of cattle, sheep and goats impounded for illicit grazing fell from 87,676, 101,092 and 133,698 in 1900–1901 to 76,769, 91,016 and 98,360 respectively, while the number of animals impounded for grazing in closed areas rose from 126,833 to 181,725, the increase occurring mainly in the number of goats impounded which advanced from 108,516 to 161,958. The variations are largely due to the fact that animals which grazed or browsed without permit were distinguished in the returns from Cuddapah district for the first time from those which trespassed into closed areas.

Natural Reproduction. Northern Circle.

29. The seedling of *Shorea robusta* in Ganjám district produced little result as the rain held off. This year it flowered late and the seeds were few. There was a fair reproduction of *Terminalia tomentosa and T. chebula* in Golgonda

Agency hills in Vizagapatam district. Natural reproduction was generally good throughout Gódávari district. In Kistna, the coppice growth of the Guntúr babul working circle was encouraging. Seedlings of *Hardwickia binata*, *Chloroxylon swietenia*, *Anogeissus latifolia* and *Melia* were flourishing. Bamboo thickets in Kondapalli, Kondur and Kottur reserves developed well. Reproduction from seed in the Nallamalais in Kurnool district was very poor owing to fires. *Terminalia tomentosa* and *Chloroxylon swietenia* coppiced well, while *Anogeissus latifolia* coppiced badly. Except in the leased forests and in the specially protected Yepi block of Bellary reserve, there was no natural reproduction by seed in Bellary owing to excessive grazing. Coppicing was fair in the areas felled over and afterwards placed under special protection. In Anantapur regeneration of babul growth was good, of *Dolichandrone crispa* fair, and of *Hardwickia binata* in the Kothakota working circle stationary. In Cuddapah, reproduction by coppice, especially in the case of redwood, was excellent in the felled coupes in the Cuddapah and Sidhout blocks. Regeneration

Central Circle.

by seed was generally poor owing to the dry and rocky nature of the soil, and to the destruction of the seedlings by cattle and fires. Reproduction from coppice continued good in the Sríharikóta, Survepalli and Mocherla reserves of Nellore and from seed in the palmyra-bearing areas. In Chingleput, Billu (*Chloroxylon swietenia*) and sal seedlings were flourishing and seedlings of *Melia indica*, *Pterocarpus marsupium* and *Albizzia amara* were noticeable in several blocks. Reproduction from seed was poor except under shade in North Arcot district owing to short and untimely rainfall. Bamboo seedlings were growing well on the Javadis. Seedlings of *Anogeissus latifolia*, *Pterocarpus marsupium* and *Chloroxylon swietenia* came up in some of the reserves. Reproduction from coppice was particularly good in the case of *Albizzia amara*, and *Strychnos nux vomica* and that from root-suckers continued to be good in the coupes of the Gudiyáttam range. In the tidal swamp forests of the Cuddalore range (South Arcot) self-sown seedlings of the two species of *Avicennia* flourish. In some forests *Melia indica* was gradually introducing itself everywhere. Coppice growth was good in coupes felled properly. In Salem reproduction by seed was satisfactory in the Caveri Acha (*Hardwickia*) forest. *Melia azadirachta*, *Chloroxylon swietenia*, *Albizzia amara*, *Anogeissus latifolia*, *Pterocarpus marsupium* and *Dendrocalamus strictus* came up abundantly. Reproduction of sandal was fair. In the felled coupes reproduction by coppice was promising. Reproduction from both seed and coppice was fair in the Caveri and Coleroon "padugai" forests in the Kulittalai and Udaiyárpálaiyam ranges of Trichinopoly district. Reproduction in the Patchamalais was good and kasán (*Memecylon edule*) coppiced well in the Udaiyárpálaiyam range. The dry sandy nature of the soil in Tanjore district does not appear to favour natural reproduction from seed. Kásan coppiced well, while casuarina did not.

Southern Circle.

30. In South Canara, reproduction from seed was not good, but all species, when cut, coppiced well. Teak coppice shoots and seedlings were noticeable in the successfully protected areas in North Malabar. The growth of *Xylia* seedlings on laterite soil was remarkable in South Malabar. In the Nilgiris, reproduction by coppice was as usual excellent in the Ootacamund plantations but not so satisfactory in those round Coonoor. The growth from seed was good in the Benne and Mudumalai forests, especially of *Terminalia tomentosa*, Vengai, Rosewood and Teak. The small bamboo seeded profusely in Mayur, as also the mango. During the latter part of the year all species flowered profusely in North Coimbatore, and the revenue derived from *Melia azadirachta* in the Satyamangalam range was a record one. Except where fires had penetrated, seedlings of many valuable species were noticed. Reproduction from coppice and suckers of the cut sandalwood trees was good. In South Coimbatore, natural reproduction was fair in the Pollachi range and in parts of Bolampatti, but bad in the dry portions of Udamalpet and Méttupálaiyam. In the evergreen forests of Madura which have not been worked, reproduction was very satisfactory and *Albizzia amara* coppiced well. In the deciduous forests there is scarcely any seed reproduction owing to the open state of the forest and the periodical fires. In Tinnevelly, natural reproduction continued to be good in the evergreen forests. A heavy flowering of *Messua coromandalina* was noticed during the year. The coppicing of *Grewia latifolia* was very satisfactory in the Kuttálam working circle. Outside the working circle reproduction was much retarded by fire.

Artificial Reproduction.

31. The areas of plantations and of land, in which cultural operations were carried on rose from 24,836 acres and 68,086 acres in 1900–1901 to 25,153 acres and 68,225

acres respectively, while the aggregate area of topes fell from 13,519 acres to 13,372 acres; no new topes were planted during the year. In Ganjám, experimental sowings were continued in the Napier reserve; the *Ficus elastica* plants in it were ready for transplanting. In Vizagapatam, the sowing of palmyra seeds along the boundary lines of reserves in the Sarvasiddhi taluk showed good results. In Kistna, the casualties in casuarina planted in the previous years in Gopuvanipalam reserve were replaced and 55 acres were newly planted. In Bellary, the Kuppagal plantations were extended by 10 acres. In one plantation the previous year's plants, which had been destroyed by wild pigs, had to be replaced. Date and palmyra seeds were sown in all the plantations. In Cuddapah, date seeds were sown in selected areas of unreserved land. In Nellore, a beginning was made in planting fruit-bearing and other useful trees in selected areas. In the reserved lands of the Kávali taluk 166,000 palmyra seeds were sown. In Chingleput, 50 per cent. of the transplanted bamboo saplings are thriving. Seeds of various trees were sown in furrows or pits in the Chingleput range. The Divi Divi plants in the Meyyur plantation are doing well. In North Arcot, the planting of 8 acres with Divi Divi proved a success. In South Arcot, casuarina seedlings were put out in the Cuddalore coast plantations. The sandalwood seedlings on the plateau and slopes of the Chitteris in Salem district were thriving. In Tanjore 8,800 palmyra seeds were dibbled along the boundaries of the reserved forests and the seedlings are doing well. The babul seeds dibbled in near a tank germinated well and the seedlings are thriving. In South Canara, the *Swietenia mahagoni* and *S. macrophylla* are thriving in the Range office compound at Puttur. In North Malabar, about 47 acres were planted with teak and 60 per cent. of the plants survive. About 30 acres were planted with Jack (*Artocarpus*); the plantation has done well. In South Malabar, 123 acres, prepared for planting in the previous year, were planted with teak seedlings, and 121 acres were prepared for planting. In Madura, 12,300 casualties were replaced in the blue-gum plantations. In addition to these, minor operations were carried on in various places; other operations were generally unsuccessful owing to the unfavourable nature of the season or soil. Early thinnings and other operations for the improvement of growing stock were carried out. Experiments were conducted with varying success in several parts of the Presidency, especially in connection with *Agave ixtle*, Bamboos, Rubber trees, Date trees, Divi Divi, Durian plants, *Eucalyptus, Grevillea robusta, Hæmatoxylon campeachianum, Ipecacuanha*, Mahogany *Swietenia macrophylla, Mallotus philippinensis, Pterocarpus indicus, Paspalum dilatatum and Sterculia elata.*

Northern Circle.

Central Circle.

Southern Circle.

Exploitation.

32. The exploitation of the forests is carried on mainly by means of fellings which are classified as clear or regeneration fellings, selection fellings, improvement fellings, coppice fellings, and unregulated fellings, the amounts realized by the sale of grass were highest in Kurnool and Bellary. Hay-making was attempted on a small scale in Vizagapatam, Anantapur, Salem and the Nilgiris. The revenue derived from grazing and removals of grass rose from Rs. 5,10,451 in 1900–1901 to Rs 5,40,068. There is an increase in the Northern Circle, especially in Kurnool and Anantapur, due to the large number of permits taken out, but in the other two circles there was a decrease on account of the increased number of cattle permitted to graze free owing to the unfavourable season; in all the districts the rates charged were the same as in the previous year. The collection of miscellaneous produce was very generally leased out to contractors in the usual way.

Gross yield and outturn of forest produce.

33. Forest produce is classified under four heads—timber, fuel, bamboos and minor produce. The yield was more than in 1900–1901 under every head except timber, the yield of which fell by 11,567 cubic feet to 3,211,888, although there was an increase in the quantity removed by purchasers. The amount of fuel rose from 14,823,398 cubic feet to 15,518,533. There was a marked rise of 38·9 per cent. in the yield of bamboos which rose from 29,958,554 canes in 1900–1901 to 39,217,618; the increase occurred in the quantity removed by purchasers and was due chiefly to the large demand from sugarcane planters in Gódávari and to the leasing of bamboo coupes and the reduction of the rate charged for dry bamboos in South Coimbatore. The increase of Rs. 99,548 (9 per cent.) in value of minor producy (Rs. 11,91,228) was due to several causes; it occurred in the quantity removed by purchasers which formed the bulk of the minor produce. The amount realized by the sale of confiscated produce was Rs. 15,648 or Rs. 2,488 more than in 1900–1901; the increase occurred mainly in Gódávari where more drift timber was seized than

in the previous year; the quantity of timber confiscated rose from 76,045 cubic feet to 162,419 cubic feet, but the amount of firewood confiscated fell from 76,752 cubic feet to 40,749 cubic feet.

Financial results.

34. The gross receipts during the year were Rs. 24,96,494 and exceeded those of the previous year by Rs. 52,721 and the total expenditure rose by Rs. 7,931 to Rs. 17,46,121. The increase under receipts was distributed over the Northern and Central Circles, but was partly reduced by a decrease of Rs. 1,42,453 in the Southern Circle. The expenditure increased in the Northern and Central Circles by Rs. 19,903 and Rs. 40,173 respectively, while there was a fall of Rs. 52,145 in expenditure in the Southern Circle. The net result in the Southern Circle was a deficit of Rs. 36,965. The net revenue (Rs. 7,50,373) was Rs. 44,790 more than in the previous year and Rs. 1,56,228 in excess of the average annual surplus since 1895. The revenue due to the department fell from Rs. 2,03,712 at the commencement of the year to Rs. 1,73,311 at its close. Among the receipts there was an increase of Rs. 83,928 under fuel on account of the supply to railway companies and camps for Boers; the same cause largely accounted for the excess of Rs. 11,175 in the expenditure on conservancy and works over that of the previous year. Salem contributed 19 per cent. of the net surplus, Gódávari 15 per cent., Nellore 14 per cent., Kurnool 12 per cent., Bellary 11 per cent., and Kistna 10 per cent.

Miscellaneous.

35. Measures were adopted in some districts to encourage the growth of trees and shrubs which yield manure-leaves. The steps taken in the several districts to enable the supply of forest-produce to meet the needs of the people include the establishment of additional permit-issuing stations, the opening of depots and coupes and the fixing of the rates at which coupe-contractors might sell to the public. In South Canara certain alterations were made in the lists of reserved and classified trees for the ranges and the concession of allowing the public to collect dry firewood, manure-leaves and grass, free of charge, was continued in a portion of the Baindur reserve. Orders were passed during the year extending to other districts the system in vogue in Madura of selling permits like stamps, as a safeguard against defalcations. Two rangers and three deputy rangers were sent to the forest school during the year and one ranger, four deputy rangers and seven students returned from the school with rangers' certificates. During the year the rangerships were recruited from passed Dehra students, some of whom were stipendiaries, while others had served as deputy rangers and foresters prior to their training. The conduct of the protective staff continued to be unsatisfactory; there were several dismissals and suspensions amongst the forest guards and watchers for misconduct and neglect of duty. The number of elephants rose from 53 in the previous year to 61. The work of the saw-mill at Mount Stuart was hampered by a disastrous flood; the wire rope-way at the same place led to a saving of $6\frac{1}{2}$ pies per cubic foot on the cost of transport by road from the Anamalais. The forest museum at Coimbatore in the Southern Circle comprises a large collection of forest products and considerable progress was made during the year.

MINES AND QUARRIES. (1901.)

36. The following statement shows in one view the districts in which operations were carried on during the year and the reported output of the minerals worked:—

Mineral.	Districts.	Output.
		Tons.
1. Gold	The Nilgiris and Coimbatore	*Nil.*
2. Diamonds	Anantapur	*Nil.*
3. Corundum	Salem	22¾
4. Graphite	Gódávari	295
5. Manganese	Vizagapatam	76,463
6. Magnesit	Salem	½ a ton.
7. Mica	Nellore 225 tons North Arcot *nil.* The Nilgiris 3 tons	2

37. With the exception of the mica industry in Nellore and the manganese mines in Vizagapatam, there is no mining on an extensive scale in this Presidency. In both the districts mentioned the bulk of the mines consist of large open excavations from which the mineral products are removed by manual labour; in Nellore, however, four mica mines contain underground tunnels varying from 50 to 150 feet in length and are worked by machinery. The mica mines of Nellore district are occasionally inspected by the Collector and the District Forest officer. No mining board was appointed for any district in this Presidency, but Collectors have been empowered by the Local Government to exercise within their districts the functions of a mining board until such bodies are constituted under the Act. The general health of employés in all the districts in which mining operations were carried on is reported to have been good. The wages of the labourers employed in Nellore and Anantapur are reported to be higher than the rates prevailing for other kinds of unskilled labour and the condition of the employés is said to compare favourably with that of the ordinary cooly. Children were nowhere employed below ground during the year. In Nellore district, where child labour was largely utilized above ground, it appears that the nature of their employment was light work, such as sorting the different classes of mica. Women do not appear to have been employed underground except in the diamond mines at Vajrakarur in Anantapur district. Several fatal accidents occurred in Nellore district owing to the sudden collapse of the sides of the mines. It was suggested to the Government of India that the Chief Inspector of Mines should be deputed to inspect the mines and to suggest methods for preventing such accidents. There were no prosecutions under the Indian Mines Act (VIII of 1901) during the year.

MANUFACTURES.

[*Judicial and Administrative Statistics of British India, XIX—Factories, pages 358 to 365, 371 to 373.*]

Industries. (1901-1902.)

38. The chief industries carried on during the year were cotton-pressing and ginning, cotton-spinning and weaving, tanning of hides and skins, refining sugar, oil-pressing, bone-crushing, tobacco-curing and tile-making. The number of cotton mills increased from 11 to 12 and employed 12,988 hands. While the number of cotton-pressing and ginning works rose from 48 to 52, the number of hands employed in them decreased from 3,085 to 3,025. Tanneries of hides and skins fell from 17 to 15, and they employed 814 hands. On the other hand, the number of sugar-refineries increased from 7 to 8, and gave employment to 2,213 men. There were 19 oil-mills, 2 bone-crushing mills and 4 tobacco-factories. They gave work to 4,084 hands. There were also 23 tileries, 10 fish-curing yards and 32 printing-presses. These figures exclude all works that do not employ 25 hands at least.

Factories. (1901.)

39. The number of factories coming within the purview of the Indian Factories Act (XV of 1881) advanced from 84 in the previous year to 94. The daily average number of operatives employed on factory-labour rose from 32,493 in 1900 to 34,184 in 1901. The work of inspection was on the whole satisfactorily performed both by the magistracy and by medical officers. The reports of the inspecting officers both as to the sanitary condition of the factories and the general health of the operatives were generally favourable. As usual, the wages earned by factory-labour compared favourably with that of the ordinary agricultural labourer. There were 2,540 women and 1,922 children employed in these factories in 1901, while there were 2,416 and 1,483, respectively, in 1900. The arrangements in force for the fencing of machinery appear to have been generally adequate. The number of accidents, however, increased from 156 in 1900 to 217 in the year under report: the increase was most marked in the factories in Madras city, and in the Madras Railway factory at Perambúr. Fifteen of the accidents were of a serious nature, 3 proving fatal. There were no prosecutions under the Act during the year under report.

TRADE. (1901–1902.)

Total trade.

40. The total value of the sea-borne trade of the Presidency during the year under report, exclusive of treasure and transactions on account of Government, amounted to 30 crores and 83½ lakhs of rupees, whereas it was 30 crores and 69½ lakhs of rupees in the preceding year; the increase of Rs. 14 lakhs is the net result of an increase of Rs. 39 lakhs under imports and of a decrease of Rs. 25 lakhs under exports.

41. The total value of the external trade amounted to Rs. 28,19,54,520, of which Rs. 15,21,70,544 represented exports and Rs. 12,97,83,976 imports. While the value of the imports showed an increase of nearly Rs. 48½ lakhs over the previous year, the exports as compared with last year fell short by a little more than Rs. 14¼ lakhs mainly under hides and skins, raw cotton and sugar. The trade with British ports and with Indian ports not British declined, the fall in exports to Indian ports not British from Rs. 20½ lakhs to Rs. 15¾ lakhs being particularly noticeable; on the other hand the values of both exports from and imports to foreign countries advanced, the value of exports (Rs. 1,185 lakhs) having risen by Rs. 10 lakhs and the value of imports (Rs. 768¼ lakhs) by as much as Rs. 106 lakhs.

Exports.

42. In the following statement the exports of the principal articles of Indian produce and manufacture during the past year are compared with the exports during the preceding year :—

Articles.	1900-1901.		1901-1902.		Percentage of value.	
	Quantity.	Value.	Quantity.	Value.	1900-1901.	1901-1902.
		Rs.		Rs.		
1. Hides and skins ... ... Cwt.	430,066	3,75,65,275	304,008	2,75,05,342	24·62	18·23
2. Seeds ... ... „	815,138	55,59,125	1,831,675	1,27,88,715	3·64	8·48
3. Coffee ... ... „	249,877	1,24,06,025	260,647	1,27,38,749	8·13	8·45
4. Grain and pulse—						
Rice ... ... „	967,932	52,22,271	2,126,933	1,13,49,437		
Paddy ... ... „	237,526	6,73,606	280,270	7,69,963	4·39	8·23
Other grains ... ... „	157,311	7,99,013	70,979	2,92,921		
5. Cotton, raw ... ... „	524,747	1,58,04,522	412,558	1,12,36,499	10·35	7·45
6. Spices ... ... Lb.	32,696,944	81,98,646	36,536,929	95,77,005	5·38	6·35
7. Oils ... ... Gals.	7,255,562	88,82,570	6,894,822	95,41,189	5·82	6·33
8. Cotton piece-goods ... ... Yds.	34,644,561	1,00,12,045	32,962,395	91,11,902	6·56	6·04
9. Coir, yarn and rope ... Cwt.	698,330	59,76,867	651,517	55,96,981	3·92	3·71
10. Indigo ... ... „	18,955	39,29,051	25,472	49,48,425	2·58	3·28
11. Tobacco ... ... Lb.	10,793,331	28,12,226	10,979,115	34,70,197	1·84	2·30
12. Tea ... ... „	4,927,629	32,58,808	5,354,609	33,70,095	2·14	2·24
13. Cocoanuts ... ... No.	70,594,515	17,63,077	40,971,502	12,71,043	2·87	2·03
Cocoanut kernel ... ... Cwt.	248,643	26,18,142	134,820	17,95,305		
14. Sugar ... ... „	456,054	36,63,790	317,393	27,41,304	2·40	1·82
15. Cotton, twist and yarn ... Lb.	1,863,937	6,81,326	4,790,063	19,41,654	0·45	1·29
16. Animals, living ... ... No.	296,932	18,54,006	294,988	18,17,520	1·22	1·20
17. Timber and wood ... ... Val.	...	20,57,667	...	15,80,171	1·35	1·05
All other articles ... ... „	...	1,87,93,924	...	1,73,67,978	12·34	11·52
Total, merchandise ...	...	15,25,31,982	...	15,08,12,395	100	100
Re-exports	...	10,70,076	...	13,58,149	...	...
Grand Total ...	...	15,36,02,058	...	15,21,70,544	...	...

Hides and skins.

43. The decrease from Rs. 375½ lakhs to Rs. 275 lakhs in the exports of hides and skins is explained by the fact that the exports of 1900–1901 were abnormal owing to large cattle mortality during the famine in the Northern and Central Provinces, from which the hides found their way to Madras owing to a better system of curing adopted in its tanneries. The decrease was chiefly in the exports of tanned hides and skins to the United Kingdom and United States and of tanned skins to the Straits Settlements and Japan. The above decreases were counterbalanced to some extent by the increase in the exports of raw skins partly to the United Kingdom, but chiefly to the United States to be tanned by the process known as *chrome tannage*, leather so prepared having been in brisk demand in the London market. Of the total quantity of hides and skins, the United Kingdom took 68·61 per cent., the United States 24·89 per cent., and the other countries 6·5

per cent. Hides and skins form the most important item of export, their value being 18·23 per cent. of the total value of exports.

Seeds.

44. The exports of groundnuts (Rs. 72,83,842) amounted to more than three times those in the previous year (Rs. 20,73,077) owing to an enormous production of the nut as the season was favourable. The exports were chiefly from Cuddalore to France. The exports of gingelly and castor seeds rose from Rs. 18,21,674 and Rs. 4,05,035 to Rs. 25,73,646 and Rs. 14,07,529, respectively. There were large increases in the exports of gingelly seed from Cocanada to France and of castor seed from the same port to the same country, to the United Kingdom and to Calcutta; these increases were also due to the favourable season. Of the Rs. 15 lakhs worth of "other sorts" of seeds, nearly Rs. 12 lakhs worth were "essential" seeds such as coriander, cummin, fenugreek and niger. The exports of niger seed to France and the United Kingdom were worth Rs. 2 lakhs each; and the exports of coriander seed to Ceylon amounted to Rs. 1¼ lakhs. Nearly Rs. 2 lakhs worth of rape seed was exported to the United Kingdom.

Coffee.

45. There was a decline of Rs. 10½ lakhs in the exports of coffee to the United Kingdom, but a rise of nearly the same amount in those to France was probably due to the fact that coffee was shipped to the latter country direct instead of through the former. The only other considerable variation was an increase of nearly Rs. 3 lakhs in the exports to Ceylon.

Grain and pulse.

46. The exports of rice (Rs. 1,13,49,439) rose to more than twice those in the preceding year (Rs. 52,22,271) owing to good harvests in some districts. There was an increase of nearly a lakh of rupees in the exports of paddy (Rs. 7,69,963), but the exports of other grain (Rs. 2,92,921) fell by Rs. 5 lakhs chiefly on account of the fall in demand from Bombay.

Raw cotton.

47. The exports of raw cotton (Rs. 1,12,36,499) fell by Rs. 45½ lakhs. There were large decreases in the exports to European countries, as they preferred the long-stapled American and Egyptian cotton to the inferior Indian article, which, however, found a suitable market in Japan and China which took nearly Rs. 56 lakhs worth and Rs. 6¾ lakhs worth, respectively, more than in 1900–1901. The deficiency is also due to a failure of the cotton crop in the Deccan districts, and to a curtailment of the area under cultivation which was 10 per cent. below the normal area. Of the total quantity, 57·5 per cent. was exported to Japan, 10·13 per cent. to Belgium, 10·05 per cent. to the United Kingdom, 6·54 per cent. to China, 5·31 per cent. to France, 3·7 per cent. to Germany, 2·05 per cent. to Italy and 4·72 per cent. to other countries.

Spices.

48. The exports of pepper rose from Rs. 51,31,232 to Rs. 64,05,984. There is a large increase of Rs. 12½ lakhs in the exports of pepper to France chiefly from the Tellicherry port. The increase is stated to be due to an abundant crop being coincident with a large demand. The minor variations, viz., the decrease under betelnuts and the increase under cardamoms were in the exports to Bombay. The exports of ginger and cardamoms advanced from Rs. 6,55,665 and Rs. 4,07,349 to Rs. 8,25,943 and Rs. 7,48,446, respectively; on the other hand, the exports of chillies and betelnuts declined by Rs. 1,03,240 and Rs. 3,01,076 to Rs. 8,14,418 and Rs. 7,58,948. Pepper was chiefly exported to France, Bengal, Bombay, Germany, the United Kingdom and Italy; ginger to the United Kingdom and Bombay; chillies to Ceylon; betelnuts to Bombay and Kattywar; and cardamoms to Bombay.

Oils.

49. The decrease of Rs. 4,62,594 in the exports of cocoanut oil was chiefly in the exports to the United Kingdom and Germany, and is attributed to the prevalence of higher prices in the local market in the past year than in the previous year. The increase from Rs. 19,98,443 to Rs. 25,66,148 in the exports of groundnut was mainly due to a rise in the exports from Cuddalore to Burma owing to a larger production of the nut in 1901–1902 than in 1900–1901. The large increase of Rs. 2,95,991 in the exports of castor oil (Rs. 5,84,733) was due to the favourable season. Cocoanut oil was chiefly exported to Bombay (Rs. 21¾ lakhs), Bengal (Rs. 14 lakhs), Burma (Rs. 8¼ lakhs), United Kingdom (Rs. 5 lakhs) and United States (Rs. 4½ lakhs). Of the Rs. 25½ lakhs worth of groundnut oil Rs. 20¾ lakhs worth went to Burma, and the remainder to Bengal and Bombay.

Cotton piece-goods.

50. The only remarkable variation in the exports of cotton piece-goods (Rs. 91,11,902) was the decrease of Rs. 10½ lakhs under coloured goods (Rs. 83,40,648) which appears to be chiefly due to the unusually large exports of these goods to the Straits Settlements in 1900–1901. An increase of Rs. 5 lakhs in the exports of Madras Mill goods to Philippines was counterbalanced by minor decreases in the exports to other countries. Grey goods were taken chiefly by Burma, Bengal, China and the Straits Settlements and coloured goods by the Straits Settlements (Rs. 37¾ lakhs), Ceylon (Rs. 22¼ lakhs), the Philippines (Rs. 13½ lakhs) and Burma (Rs. 5½ lakhs).

Coir yarn and rope.

51. The fall of Rs. 3,79,886 in the exports of coir yarn and rope (Rs. 55,96,981) was mainly due to decrease of Rs. 1¾ lakhs in the exports to the United Kingdom and of the same amount to Bengal. Of the total quantity of exports, the United Kingdom took 23·72 per cent., Bombay 22·83 per cent., Germany 16·63 per cent., Bengal 9·44 per cent., Belgium 5·73 per cent., United States 4·53 per cent., France 4·09 per cent., and other countries 13·03 per cent.

Indigo.

52. After a continuous decline in the exports of indigo from Rs. 106¾ lakhs in 1897–98 to Rs. 39¼ lakhs in 1900–1901, owing to bad seasons and competition with synthetic indigo, there was a rise of Rs. 10 lakhs in the year 1901–1902. This is attributed to the favourable season, and the comparatively good demand in Europe, chiefly in the United Kingdom, where the natural product is preferred to the artificial for special purposes. Of the total increase Rs. 8¼ lakhs occurred in the exports to the United Kingdom, and one lakh of rupees in those to each of the countries of Austria-Hungary and Turkey in Asia. There were also small increases in the exports to other countries. But Egypt took Rs. 2 lakhs worth less and United States nearly a lakh of rupees worth less than in 1900–1901.

Tobacco.

53. The exports of tabacco leaf fell from Rs. 18,22,156 to Rs. 17,09,481; Rs. 14 lakhs worth went to Burma and one lakh of rupees worth to the Straits Settlements. The rise of Rs. 7,66,332 in the exports of cigars (Rs. 17,51,959) was noticeable; Natal and Cape Colony took over Rs. 7 lakhs worth for the use of troops, the United Kingdom Rs. 4¼ lakhs worth, Bengal Rs. 2¼ lakhs worth and Straits Settlements one lakh of rupees worth.

Tea.

54. There was a small increase both in quantity and value of the exports of tea from this Presidency. Of the total quantity (5,354,609 lbs.), the United Kingdom took 92·52 per cent. The gross value of the exports of tea was Rs. 31,70,095; the value of tea exported to the United Kingdom was Rs. 31,56,182 and of that exported to Ceylon was Rs. 1,05,694.

Cocoanuts and cocoanut-kernels.

55. The value of the exports of the cocoanuts and their kernels to Bombay fell short of the value of the exports in the preceding year by Rs. 8¾ lakhs, and the fall in the total exports (Rs. 30,66,348) was Rs. 13 lakhs. The decrease is attributed to an unfavourable season, which affected also the produce of cocoanut oil.

Sugar.

56. The total exports of sugar (Rs. 27,41,304) show a decrease of Rs. 9 lakhs. The decrease occurred chiefly in the exports of unrefined sugar to the United Kingdom, which fell from Rs. 12 lakhs in 1900–1901 to Rs. 4¾ lakhs in the year 1901–1902. Much of the raw sugar which hitherto found a foreign market was required for the local sugar industries, whose refining operations were considerably enlarged. Refined sugar was exported to Bengal to the value of Rs. 17½ lakhs and to Burma to the value of Rs. 1½ lakhs.

Cotton twist and yarn.

57. The increase of Rs. 12½ lakhs in the exports of cotton twist and yarn (Rs. 19,41,654) occurred in the exports to China, the condition of that country having improved on the cessation of hostilities existing during the previous year.

Animals.

58. Of the gross value (Rs. 18,17,520) of living animals exported, the value of those sent to Ceylon amounted to Rs. 14 lakhs, and of those sent to the Straits Settlements to Rs. 4 lakhs.

Timber and wood.

59. The exports of timber and wood fell from Rs. 20,57,667 to Rs. 15,80,171. The value of teak exported fell from Rs. 2,16,833 to Rs. 86,042 and of other timber from Rs. 5,55,648 to Rs. 3,74,730; the gross value of ornamental wood exported

declined from Rs. 10,46,207 to Rs. 8,28,685, but the exports of manufacture of wood rose from Rs. 2,22,449 to Rs. 2,78,704. The decrease in the gross value of exports occurred chiefly in the exports to France and Germany of sandalwood and timber. Sandalwood was chiefly exported to the United Kingdom, Germany, France, and the United States, timber to Bombay, Sind, Kutch and Kattywar and manufactures of wood to Ceylon.

Imports.

60. Of the total value of imports, amounting to Rs. 12,97,83,976, the value of Indian produce was Rs. 4,16,74,423, and the value of foreign merchandise Rs. 8,81,09,553. The increase of Rs. 48½ lakhs in the total imports is the net result of a rise of Rs. 112½ lakhs in foreign merchandise and of a fall of Rs. 64 lakhs in Indian produce. In the following statement the imports of the principal articles of merchandise in 1901–1902 are compared with the imports during the preceding year :—

Articles.	1900–1901.		1901–1902.		Percentage of value.	
	Quantity.	Value.	Quantity.	Value.	1900–1901.	1901–1902.
		Rs.		Rs.		
Cotton piece-goods ... ... Yds.	145,502,571	2,29,94,763	161,701,290	2,55,00,131	18·40	19·65
Grain and pulse ... ... Cwt.	8,094,578	3,07,73,271	7,158,429	2,40,39,112	24·63	18·52
Cotton twist and yarn ... lb.	15,152,637	1,02,77,115	15,282,190	96,00,757	8·23	7·40
Metals ... ... Cwt.	699,647	72,92,550	876,019	91,27,399	5·84	7·03
Railway materials ... ... Value.	...	26,99,265	...	75,50,337	2·16	5·82
Kerosine oil ... ... Gals.	11,807,894	52,20,530	15,103,033	58,32,935	4·18	4·49
Salt ... ... Tons.	40,168	33,70,320	51,462	39,05,220	2·70	3·01
Apparel ... ... Value.	...	26,34,395	...	32,75,334	2·11	2·52
Spices ... ... lb.	21,541,155	25,04,389	22,396,188	29,94,461	2·00	2·31
Machinery and mill work ... Value.	...	28,07,550	...	28,56,760	2·24	2·20
Timber and wood ... ... „	...	25,53,400	...	26,89,197	2·04	2·07
Coal, coke and patent fuel ... Tons.	218,622	24,08,831	244,556	26,47,436	1·93	2·04
Hardware and cutlery ... Value.	...	25,56,962	...	25,68,846	2·05	1·98
Drugs, medicines and narcotics ... ... „	...	18,99,035	...	22,20,172	1·52	1·71
Liquors ... ... Gals.	697,683	22,26,758	626,680	21,16,104	1·78	1·63
Provisions ... ... Value.	...	18,04,834	...	19,36,788	1·44	1·49
Stationery including paper and paste-board ... ... „	...	19,68,744	..	17,98,124	1·58	1·39
Gunny bags ... ... No.	8,266,593	15,60,697	7,903,638	13,61,213	1·25	1·05
Other articles ... ... Value.	...	1,73,87,538	...	1,77,63,650	13·92	13·69
Total ...	...	12,49,40,947	...	12,97,83,976	100·	100·

Cotton piece-goods.

61. There was an increase of Rs. 25 lakhs in the imports of cotton piece-goods (Rs. 2,55,00,131) over those in the preceding year. The increase occurred chiefly in the imports from the United Kingdom and is explained by the fact that the prices obtaining in 1900–1901 were so good that large orders were placed in the market for the succeeding year. Stocks also were unusually low at the close of 1900–1901 owing to superstitious apprehension of disaster in the year 'Vikari.' Imports of all kinds of piece-goods rose. The total value of foreign goods imported amounted to nearly Rs. 250½ lakhs; about Rs. 205½ lakhs worth were imported from the United Kingdom and Rs. 30¼ lakhs worth from Bombay. Of Indian piece-goods, valued on the aggregate at Rs. 4½ lakhs, Rs. 3½ lakhs worth consisting chiefly of grey and coloured goods was imported from Bombay.

Grain and pulse.

62. The imports of rice fell from Rs. 1,72,48,719 to Rs. 90,31,056, but the imports of paddy and other grains rose from Rs. 76,25,015 to Rs. 77,01,110 and Rs. 58,99,537 to Rs. 73,06,946 respectively. There is a large decrease (Rs. 67¼ lakhs) in the gross imports due to an improvement in local production as compared with the preceding year. The imports were mainly from Burma (Rs. 153¾ lakhs), Bombay (Rs. 40¼ lakhs) and Bengal (Rs. 38¾ lakhs). The fall in the imports of Bengal grain from Rs. 132¾ lakhs to Rs. 38¾ lakhs is noticeable.

Cotton twist and yarn.

63. There was an increase in quantity but a decrease in the value of the imports of cotton twist and yarn. This was the result of an increase in the imports of coarse yarn from Bombay while there was a fall in the imports of fine yarn from the United Kingdom to the value of Rs. 7¼ lakhs.

Metals.

64. The imports of metals rose from Rs. 72,92,550 to Rs. 91,27,399; the main increments were in the imports of aluminium from Rs. 23,306 to Rs. 1,02,985, of copper from Rs. 9,89,688 to Rs. 16,33,905, of German silver from Rs. 1,09,627 to Rs. 2,90,402, of iron from Rs. 42,74,154 to Rs. 48,14,050, of steel from Rs. 8,77,469 to Rs. 11,53,508 and of tin from Rs. 1,28,899 to Rs. 1,92,456; the imports of zinc fell from Rs. 1,44,216 to Rs. 89,725. The small imports of aluminium in 1900–1901 were due to the large stock of the metal on hand. The increase in the imports of copper was due to more favourable prices. The reason for the larger imports of German silver was due to the fact that ornaments are now made of this metal for the poor. The rise in the imports of iron and steel was due to the more extensive use of these materials as beams, pillars and girders, in the construction of buildings and bridges, and partly to the gradual recovery of the country from scarcity and to the activity in trade in consequence.

Railway materials.

65. The large increase in the imports of railway materials was due to the construction of the Tanjore District Board Railway, of the Madura-Pámban and Tinnevelly-Quilon branches of the South Indian Railway and of the Calicut-Cannanore and Shoranur-Cochin extensions of the Madras Railway.

Kerosine oil.

66. The imports of kerosine oil increased on account of a fall in prices and the opening of new markets for bulk oil.

Salt.

67. The increase in the imports of salt was due to a rise in the imports from Bombay, but the total imports were a lakh below those of 1899–1900.

Apparel.

68. The increase in the imports of apparel was the result of very large imports of gilt silver thread, agents from the several manufacturers having been in the country collecting orders.

Spices.

69. The imports of betelnuts from Ceylon were larger than in the preceding year owing to abundant crops in that island. Of the total imports of spices of a value of Rs. 30 lakhs, the value of betelnuts from Ceylon amounted to Rs. 15 lakhs, and of those from the Straits Settlements to Rs. 11 lakhs.

Machinery and mill work.

70. There was a small increase in the imports of machinery and mill work; out of the Rs. 28½ lakhs worth of imports, Rs. 26½ lakhs worth came from the United Kingdom.

Timber and wood.

71. There was a slight fall in the imports of teak but the imports of other timber rose from Rs. 2,14,071 to Rs. 3,23,327; the imports of wood manufactures advanced from Rs. 4,48,519 to Rs. 5,10,897. These accounted for the rise in the gross imports of wood and timber from Rs. 25,53,400 to Rs. 26,89,197. Of the total imports, 72 per cent. came from Burma, and 11 per cent. from Bombay, and the imports of Indian produce amounted to Rs. 23¼ lakhs out of the total.

Coal, coke and patent fuel.

72. The increase of Rs. 2½ lakhs in the imports of coal, coke and patent fuel was the result of an increase of Rs. 3½ lakhs in the imports from Bengal partly counterbalanced by a decrease of one lakh in the imports from the United Kingdom. Of the total imports, 98·5 per cent. were from Bengal and one per cent. from the United Kingdom.

Hardware and cutlery.

73. There was very little variation in the imports of hardware and cutlery; of the total imports to the value of Rs. 25½ lakhs, Rs. 12¾ lakhs worth came from the United Kingdom, and Rs. 6½ lakhs worth of foreign manufactured articles came *viâ* Bombay. The value of imports from Germany amounted to nearly a lakh of rupees, while no other European country imported more than a lakh of rupees worth into this Presidency.

Drugs, medicines and narcotics.

74. The imports of drugs and medicines excluding chemicals and unmanufactured tobacco rose from Rs. 12,09,558 to Rs. 12,43,664 and Rs. 2,77,296 to Rs. 6,08,152 respectively; but the imports of opium and manufactured tobacco fell from Rs. 47,768 and Rs. 3,64,413 to Rs. 26,257 and Rs. 3,42,099 respectively. Of the total imports of drugs and medicines, Rs. 3 lakhs worth (chiefly camphor) came from Japan, Rs. 2½ lakhs worth from the Straits Settlements, Rs. 2 lakhs

worth from the United Kingdom, and Rs. 3½ lakhs worth (mostly foreign produce) from Bombay. Of the tobacco leaf, Rs. 1¾ lakhs worth came from Holland and Rs. 1¼ lakhs worth from Belgium.

75. The considerable decrease in the imports of ale, beer and porter from Rs. 6,12,098 to Rs. 4,88,818 was due to the small number of British troops in the Presidency; of the ale, beer and porter imported 91·43 per cent. came from the United Kingdom. The imports of brandy and whisky rose from Rs. 2,99,455 and Rs. 4,78,356 to Rs. 3,55,735 and Rs. 4,98,257 respectively; but the imports of other spirits fell from Rs. 2,76,355 to Rs. 2,55,744. The gross value of spirits and liqueurs imported advanced from Rs. 12,05,916 to Rs. 12,53,376; of the spirits and liqueurs imported 65·92 per cent. came from the United Kingdom and 11·32 per cent. from Ceylon. The imports of wines fell from Rs. 4,06,419 to Rs. 3,69,733. The imports of claret and sherry increased, but those of champagne and port declined. Of the total quantity of wines imported, 45·36 per cent. was imported from the United Kingdom, 20·73 per cent. from France, and the remainder from Italy, Belgium, Germany, Spain and other countries. Liquors.

76. Of the total imports of provisions the United Kingdom supplied 41·22 per cent., Asiatic Turkey 9·28 per cent., Straits Settlements 5·79 per cent., Ceylon 5·19 per cent., Bombay 22·68 per cent. (chiefly foreign produce), and other countries 15·84 per cent. Provisions.

77. A decrease of Rs. 2¼ lakhs in the imports of stationery from the United Kingdom was partly counterbalanced by small increases in the imports from other countries. It is stated that a larger quantity of Indian paper was used than in the previous year and that a larger quantity was also brought by rail *viâ* Bombay than in 1900–1901. Stationery including paper and paste-board.

78. Out of the total imports of gunny bags, Rs. 8½ lakhs worth came from Bengal and Rs. 4½ lakhs worth from Ceylon. Gunny bags.

79. The imports of the more important of the other articles, the countries from which they were principally imported, and the value of the articles are shown below:— Other articles.

Articles.	Total value. 1900-1901.	Total value. 1901-1902.	Countries from which imported.	Value of articles imported from the countries mentioned 1901-1902
	LAKHS.	LAKHS.		LAKHS.
Animals	9¾	4¾	Victoria	4½
Arms, ammunition and military stores.	10½	13⅛	United Kingdom	11⅛
Chemicals	11½	10¼	Do.	7
Cotton, raw	12½	10¾	Egypt	¾
			Bombay	9¼
			Burma	¼
Dyeing and tanning materials ...	12¾	11¾	Belgium	3⅝
			Bombay	4⅛
			Burma	¾
			Bengal	⅛
Glass and glassware	7½	9¾	United Kingdom	1¼
			Austria-Hungary	2½
			Belgium	2
			Bombay	2
Seeds	8½	10½	Bengal	1½
			Bombay	7¾
Sugar	6¼	12¾	United Kingdom	1⅛
			Straits Settlements	5½
			Bombay	4
Woollen manufactures	6½	6¼	United Kingdom	4½
			Bombay	1

80. The Rs. 5½ lakhs worth of sugar imported from the Straits Settlements was said to be Java sugar specially brought for the sugar refinery at Samalkota, and as the importation was not profitable, it is not likely to be repeated.

81. The imports on private account of gold and silver rose from Rs. 54,98,715 and Rs. 25,80,148 to Rs. 73,94,709 and Rs. 30,04,457 respectively, and the exports Private treasure.

of gold rose from *nil* to Rs. 6,51,000 and the exports of silver fell from Rs. 27,83,906 to Rs. 8,78,438. The total imports exceeded those of the previous year by over Rs. 19 lakhs, though the imports in the latter year were the highest on record for many years. The exports of silver were less than the imports by Rs. 21¼ lakhs.

Government Stores.

82. The exports and imports of Government stores to and from ports outside the Presidency rose from Rs. 15,18,664 and Rs. 31,16,536 to Rs. 17,86,029 and Rs. 36,71,991. Of the total imports, Rs. 26¼ lakhs worth were from the United Kingdom, Rs. 7¼ lakhs worth from Bengal and Rs. 1½ lakhs worth from Burma. The increase in imports occurred in the imports of arms, ammunition and military stores, and woollen manufactures imported from the United Kingdom, their values being Rs. 3¾ and Rs. 5¼ lakhs in 1901–1902 and Rs. ½ and Rs. 3½ lakhs, respectively, in 1900–1901. Of the total exports Rs. 6¼ lakhs worth went to Burma, Rs. 3¼ lakhs worth each to Bengal and Bombay and Rs. 2 lakhs worth to Sind.

Government treasure.

83. The exports of silver on account of Government amounted to Rs. 5,37,635, of which Rs. 3,50,000 went to Bengal and Rs. 1,87,635 to Bombay. There were no imports.

Share taken by each country in total exports and imports.

84. The following statement shows the share taken by each country in the exports and imports of merchandise and treasure both private and Government :—

Countries.	Exports.	Imports.	Total.	Percentage.
	RS.	RS.	RS.	
United Kingdom	3,98,82,554	5,80,04,005	9,78,86,559	32·64
Austria-Hungary	7,63,099	9,71,450	17,34,549	·58
Belgium	21,48,906	43,91,036	65,39,942	2·18
France	1,62,50,760	21,61,591	1,84,12,351	6·14
Germany	38,31,011	13,71,760	52,02,771	1·74
Italy	8,71,346	2,08,947	10,80,293	·36
Russia	...	39,65,444	39,65,444	1·32
Spain	1,71,910	4,920	1,76,830	·06
Egypt	23,38,620	2,50,985	25,89,605	·87
Mauritius	3,20,506	19,388	3,39,894	·11
Bourbon	73,300	...	73,300	·03
United States	93,42,439	4,98,816	98,41,255	3·28
Aden	96,642	3,308	99,950	·03
Arabia	1,37,050	8,059	1,45,109	·05
Ceylon	2,34,23,378	1,11,66,157	3,45,89,535	11·54
China	24,65,966	58,419	25,24,385	·84
Japan	73,52,322	4,11,054	77,63,376	2·58
Java	4,23,740	84,042	5,07,782	·16
Persia	96,239	34,525	1,30,764	·05
Straits Settlements	61,28,401	36,17,434	97,45,835	3·25
Turkey in Asia	4,55,663	1,83,425	6,39,088	·21
New South Wales	66,841	6,131	72,972	·03
Victoria	2,94,202	7,65,974	10,60,176	·35
All other foreign countries	33,37,986	14,89,399	48,27,385	1·60
Total of foreign countries	12,02,72,881	8,96,76,269	20,99,49,150	70·00
Bengal	1,11,42,508	1,16,53,335	2,27,95,843	7·61
Bombay	1,12,33,671	2,34,35,924	3,46,69,595	11·56
Sind	6,41,742	7,36,637	13,78,379	·46
Burma	1,11,43,519	1,80,06,279	2,91,49,798	9·72
Total of British possessions in other Presidencies	3,41,61,440	5,38,32,175	8,79,93,615	29·35
Cochin	1,122	...	1,122	·00
Cutch	2,29,038	351	2,29,389	·08
Kattiawar	4,84,289	28,980	5,13,269	·17
Goa	3,57,486	77,783	4,35,269	·15
Pondicherry	78,570	3,068	81,638	·03
Travancore	4,36,696	2,50,389	6,67,085	·22
Other Indian ports not British	2,124	6,118	8,242	·00
Total of Indian ports not British	15,89,325	3,46,689	19,36,014	·65
Grand Total	15,60,23,646	14,38,55,133	29,98,78,779	100

Internal trade. Merchandise.

85. The following statement shows the trade between the ports of this Presidency for the last two years :—

Articles.	Exports. 1900-1901. Quantity.	Exports. 1900-1901. Value.	Exports. 1901-1902. Quantity.	Exports. 1901-1902. Value.
1	2	3	4	5
		Rs.		Rs.
Grain and pulse ... ... Cwt.	1,153,587	44,08,743	1,041,919	40,39,507
Cotton manufactures—				
Piece-goods ... ... Yds.	1,906,859	4,57,283	1,404,352	3,56,892
Twist and yarn ... ... lb.	609,981	2,28,662	479,930	1,82,366
Seeds ... ... Cwt.	70,303	4,66,317	82,107	4,38,912
Oils ... ... Gals.	569,181	5,78,306	802,419	9,15,050
Oils ... ... Cwt.	...	...	20	82
Spices ... ... lb.	4,941,508	8,58,533	5,233,376	9,00,277
Provisions ... ... Val.	...	4,72,388	...	6,13,674
Metals ... ... Cwt.	7,568	88,496	8,685	70,327
Sugar ... ... „	155,255	10,20,592	138,692	9,39,602
Jute, raw and manufactured ... .. Val.	...	1,50,748	...	1,50,636
Tobacco ... ... lb.	2,282,781	3,08,282	2,034,027	2,62,859
Fruits and vegetables ... ... Val.	...	6,58,454	...	3,07,197
Hides and skins ... ... Cwt.	6,956	2,73,416	1,591	58,400
Timber and other wood manufactures ... Val.	...	6,78,548	...	7,32,579
Dyeing and tanning materials ... ... „	...	72,913	...	1,13,378
Coffee ... ... Cwt.	28,650	14,09,513	25,436	9,65,672
Liquors—Spirits ... ... Gals.	38,122	3,22,648	46,047	3,65,680
Coir and rope ... ... Cwt.	51,385	3,45,917	38,857	2,85,687
Woollen manufactures ... ... Val.	...	316	...	2,255
All other articles ... ... „	...	16,27,967	...	16,19,792
Total ...	...	1,44,28,042	...	1,33,20,824
Government Stores ...	...	2,15,607	...	1,87,480

Articles.	Imports. 1900-1901. Quantity.	Imports. 1900-1901. Value.	Imports. 1901-1902. Quantity.	Imports. 1901-1902. Value.
6	7	8	9	
	Rs.		Rs.	
Grain and pulse ... ... Cwt.	1,128,679	42,22,067	999,493	39,63,364
Cotton manufactures—				
Piece-goods ... ... Yds.	1,854,925	4,57,376	1,571,479	3,80,887
Twist and yarn ... ... lb.	633,130	2,36,920	540,210	2,11,883
Seeds ... ... Cwt.	55,564	3,63,823	77,494	4,30,803
Oils ... ... Gals.	480,129	5,21,406	755,853	8,43,011
Oils ... ... Cwt.	21		..	
Spices ... ... lb.	4,428,390	7,92,046	4,397,353	8,86,015
Provisions ... ... Val.	...	4,52,175	...	5,79,239
Metals ... ... Cwt.	6,629	83,046	6,669	57,728
Sugar ... ... „	162,990	10,72,549	121,463	8,47,889
Jute, raw and manufactured ... ... Val.	...	1,38,719	...	1,56,047
Tobacco ... ... lb.	2,069,356	2,84,865	1,764,087	2,40,011
Fruits and vegetables. ... ... Val.	...	8,70,195	...	3,91,562
Hides and skins ... ... Cwt.	6,512	2,67,723	1,570	58,430
Timber and other wood manufactures ... Val.	...	6,33,487	...	6,33,027
Dyeing and tanning materials ... „	...	76,129	...	80,173
Coffee ... ... Cwt.	26,457	13,07,408	26,864	10,15,162
Liquors—Spirits ... ... Gals.	50,296	3,62,579	51,174	3,78,607
Coir and rope ... ... Cwt.	60,365	3,99,805	48,152	3,41,307
Woollen manufactures ... ... Val.	...	3,934	..	2,102
All other articles ... ... „	...	14,43,326	...	15,87,010
Total ...	...	1,39,89,578	...	1,30,84,257
Government Stores ...	...	2,13,625	...	2,07,466

Treasure.

86. Rs. 4,51,115 worth of silver were exported and Rs. 4,31,115 were imported on private account between the ports within the Presidency; there were no movements of silver on account of Government and no movements of gold at all.

Share borne by each district in the total sea-borne trade.

87. The share of each district in the total sea-borne trade, including Government transactions, is shown below :—

Districts.	Trade with foreign countries.		Trade with foreign ports in India.		Trade with British ports in other Presidencies.	
	Merchandise.	Treasure.	Merchandise.	Treasure.	Merchandise.	Treasure.
1	2	3	4	5	6	7
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	10,80,43,170	85,49,212	46,911	...	2,06,04,800	3,88,586
Ganjám	10,48,927	...	10,399	...	4,84,603	...
Vizagapatam ...	25,79,818	...	17,143	...	20,36,496	...
Gódávari	67,46,587	...	77,026	...	55,27,419	...
Kistna	8,20,443	...	...	...	5,09,156	800
Nellore	...	...	...	...	...	...
South Arcot	90,95,537	...	2,053	...	60,16,117	...
Tanjore	1,14,52,839	10,45,945	1,754	...	40,62,448	25,038
Madura	16,50,318	12,870	19,751	...	5,05,927	...
Tinnevelly	2,64,99,383	20,64,020	1,85,623	...	65,41,789	...
South Canara ...	55,56,934	...	7,32,321	7,789	44,81,094	2,07,965
Malabar	2,47,82,797	350	8,35,244	...	3,64,37,713	1,63,664
Total ...	19,82,76,753	1,16,72,397	19,28,225	7,789	8,72,07,562	7,86,053

Districts.	Trade between ports in the Presidency.		Total.		Grand total.
	Merchandise.	Treasure.	Merchandise.	Treasure.	
	8	9	10	11	12
	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	6,86,126	2,74,000	12,93,81,007	92,11,798	13,85,92,805
Ganjám	4,70,025	...	20,13,954	...	20,13,954
Vizagapatam	2,26,039	...	48,59,496	...	48,59,496
Gódávari	7,75,885	...	1,31,26,917	..	1,31,26,917
Kistna	5,71,885	8,500	19,01,484	9,300	19,10,784
Nellore	1,268	...	1,268	...	1,268
South Arcot	9,24,453	7,000	1,60,38,160	7,000	1,60,45,160
Tanjore	6,25,940	3,26,965	1,61,42,981	13,97,948	1,75,40,929
Madura	7,97,156	35,465	29,73,152	48,335	30,21,487
Tinnevelly	23,90,204	2,30,300	3,56,16,999	22,94,320	3,79,11,319
South Canara	61,56,959	...	1,69,27,308	2,15,754	1,71,43,062
Malabar	1,31,74,087	...	7,52,29,841	1,64,014	7,53,93,855
Total ...	2,68,00,027	8,82,230	31,42,12,567	1,33,48,469	32,75,61,036

Shipping.

88. The number and tonnage of vessels which entered ports of this Presidency amounted to 1,974 and 1,117,006 tons, and the number of tonnage of those which cleared such ports were 1,906 and 896,548 tons; although the total number of vessels which entered or cleared was 60 less than in 1900–1901, the gross tonnage of such vessels was 169,146 tons more than in the previous year; the average tonnage rose from 468 to 519 tons. The number of steamers which entered ports fell from 893 to 832 and the number of those which cleared fell from 890 to 749; but the gross and average tonnage rose in both cases to 1,026,513 tons and 1,234 tons and 806,262 tons and 1,076 tons respectively, while in 1900–1901 the corresponding figures were 867,466, 971, 797,893 and 896, respectively. Of the steamers that entered ports 117 and of those that cleared 113 used the Suez canal; their aggregate tonnages were 312,959 and 266,042, respectively. Of 1,581 steamers which called at ports in the Presidency, 1,193 with a gross tonnage of 1,512,101 tons were British, 276 with a tonnage of 64,200 tons were British Indian and 112 with a tonnage of 256,474 tons were foreign. No British sailing vessels called, but of 2,299 sailing vessels which entered and cleared, 1,240 with a tonnage of 54,287 tons

were native craft, 984 with a tonnage of 113,758 tons were British Indian, and 75 with a tonnage of 12,734 were foreign; of 113 foreign vessels which entered and 74 which cleared, 39 Arabian vessels entered and 32 cleared, 49 German vessels with a tonnage of 147,240 entered and 13 cleared, and 15 French vessels entered and 13 cleared. The movements of shipping to and from each foreign country are shown below:—

Countries.	1900-1901.		1901-1902.	
	Number entered and cleared.	Tons.	Number entered and cleared.	Tons.
United Kingdom	139	323,692	142	344,337
Austria-Hungary	...	...	1	1,747
Belgium	3	6,162	...	...
France	17	47,336	21	57,403
Germany	32	87,615	37	108,078
Russia	15	34,394	19	43,385
Cape Colony	...	...	1	2,298
Eastern Africa	3	2,524	3	4,597
Réunion	...	...	1	493
Egypt	1	2,617	...	...
Mauritius	8	14,624	12	28,286
Natal	16	19,691	21	22,970
United States	8	16,136	10	24,051
Aden	2	1,591	2	2,413
Arabia	3	1,073	12	3,353
Ceylon	3,467	939,400	3,391	1,042,022
Maldives	11	879	8	495
Mekran and Sonmiani	12	568	10	512
Persia	4	375	8	642
Straits Settlements	158	308,174	123	283,179
Turkey in Asia	23	2,848	37	3,908
Java	...	...	6	12,509
Sumatra	...	...	1	1,575
Australia	14	25,362	13	24,352
China	...	...	1	949
Holland	2	5,063	...	...
Japan	2	4,284	...	...
Total	3,940	1,844,408	3,880	2,013,554

89. The number of vessels engaged in the coasting trade with British ports in other Presidencies and foreign ports in India which entered and cleared fell from 4,721 with a tonnage of 1,719,406 tons, and 4,742 with a tonnage of 1,804,806 tons to 4,452 with a tonnage of 1,592,964 tons, and 4,511 with a tonnage of 1,814,035 tons, respectively; of these vessels 1,428 with a tonnage of 2,873,741 tons were British, 288 with a tonnage of 97,710 tons were British Indian, 667 with a tonnage of 190,264 tons were foreign and 6,580 with a tonnage of 245,284 tons were native craft.

90. The vessels which entered from or cleared to Bombay Presidency numbered 5,771 with a tonnage of 1,015,659 tons, and those which entered from or cleared to Bengal, 630 with a tonnage of 1,273,989 tons; the share of Burma in the movement of shipping was 497 vessels with a tonnage of 775,116 tons and that of Sind was 285 vessels with a tonnage of 27,433 tons. The number of vessels which entered from or cleared to foreign ports in India was 1,780 with a tonnage of 314,802 tons. The number and tonnage of vessels engaged in the internal trade advanced. During the year 11,668 vessels with a tonnage of 3,759,618 tons entered with cargoes, and 6,335 with a tonnage of 273,765 tons entered in ballast, the corresponding figures in 1900-1901 having been 11,082, 3,252,553 tons, 5,457 and 197,204 tons. The number of vessels that cleared was 11,582 with a tonnage of 3,694,447 with cargoes and 6,586 with a tonnage of 351,525 in ballast, while in 1900-1901, 11,080 vessels with a tonnage of 3,081,342 cleared with cargoes and 5,498 with a tonnage of 319,766 tons cleared in ballast. Thirteen vessels of 470 tons gross burthen were built during the year and 22 vessels with a tonnage of 751 tons were registered under Registration of Ships Act (X of 1841) at the several ports of the Presidency.

PUBLIC WORKS—ROADS. (1901-1902.)

[*Administration Report of the Public Works Department, Madras (General and Buildings and Roads), for the year 1901-1902.*]

91. Excluding roads and streets within the limits of municipalities, 13,332½ miles of metalled roads and 9,788½ miles of unmetalled roads were maintained by public authorities; of these only 190½ miles of metalled roads and 322½ miles of unmetalled roads were maintained by the Public Works department; the remaining roads were maintained by local boards and union panchayats. The outlay by the Public Works department on communications was Rs. 3,96,824 on original works and Rs. 1,76,519 on repairs. Good progress was made on the Anamalai ghât road, which was nearly completed. The cart-road from Salem to Yercaud was also well advanced. The Chundale-Battery road in the West-Coast division and a bridle-path from Athur through the Lower Palnis in Madura division were completed.

PUBLIC WORKS—RAILWAYS AND TRAMWAYS. (1901-1902.)

[*Memorandum on the Railways controlled and inspected by the Officers of the Railway Branch of the Madras Public Works Department for the year 1901-1902.*]

Madras Railway. *5' 6" Gauge, 1,397·89 miles.*

General.

92. The strengthening of the girders of the Tungabhadra bridge on the North-West Line was completed, and the bridge was reopened for traffic on the 24th July 1901. The line between Washermenpet and Veyasarpaudy was doubled and the double line was opened for traffic during the year under report. The working results of the North-East Line for the year 1901 show a decided improvement over those of 1900. The first portion of the Calicut-Azhikal extension from Calicut to Badagara, 28¾ miles, was opened for traffic on the 1st October 1901, and the results were distinctly encouraging, the gross earnings per mile per week amounting to Rs. 323.

Accidents.

The number of accidents rose from 237 in 1900 to 336; there were four slips on the Nilgiri Railway, while there were 64 in 1900. The numbers of persons killed and injured rose from 21 and 33 to 59 and 88, respectively. These increases were due to the fact that the figures for 1900 exclude the North-East Line.

Persons employed.

The persons employed included 215 Europeans, 1,381 Eurasians and 19,930 natives. The strength and cost of the police force employed on the Madras Railway proper, excluding the North-East Line, were respectively 342 and Rs. 54,551. Besides the above force of watchmen employed by the Madras Railway Company there were the Government Railway Police to preserve law and order. The estimated cost of the whole police force for the North-East Line for the year 1901 was Rs. 13,883.

Medical department.

The medical staff of the Company consisted of a Medical officer and 25 apothecaries. The total cost of the department was Rs. 3,480 per mensem.

Schools.

The net cost of the eight schools for European and Eurasian children to the Company, after allowing for receipts on account of fees and Government grant, was Rs. 13,389, equal to Rs. 40·21 per head on the register.

Stores.

During the year 21,601 tons of stores and materials valued at £269,949 were shipped to India in 68 consignments besides 6,705 tons of coke from England at an average cost, at port of delivery, of £2-12-10 per ton. The balance of stores in hand rose from Rs. 22,49,239 at the beginning of the year to Rs. 38,37,739 at its close.

Rolling-stock.

At the close of the year, 188 locomotives, 814 coaching vehicles and 4,179 goods vehicles were in running order. During the year 110 engines passed through the shops, 30 engines and 153 vehicles were fitted with the vacuum brake, and 24 vehicles were fitted for gas lighting on Pintsch's system, making a total of 610 vehicles so fitted up to 31st December 1901.

Train service.

The percentage of trains which were late fell from 12·40 to 10·32, but 1·83 per cent. were over 90 minutes late and 1·71 per cent. in addition were over an hour late.

Rates and fares.

Third-class mail train fares of 2½ pies per mile were introduced between Olavakkot and Tirur stations with effect from the 1st October 1901. As a result of an arrangement between the Great Indian Peninsula and Southern Mahratta Railways, which affects the Madras Railway Company, the goods-rates between Bombay and Madras, and the junctions with and stations on the Southern Mahratta Railway, by the various routes, were restored to a normal basis.

93. The Kolar Gold Fields Railway from Bowringpet on the Bangalore Branch of the Madras Railway to the Kolar Mines is owned by the Mysore State and worked by the Madras Railway as a part of their system. Owing to realignment, the length of this branch has been reduced from 10 to 9·88 miles. The capital outlay up to the end of 1901 amounted to Rs. 11,20,330 and the net earnings for 1901 to Rs. 91,877, giving a percentage of 8·20 on the capital outlay.

The Kolar Gold Fields Railway. *5′ 6″ Gauge, 9·88 miles.*

94. The Nilgiri Railway is owned by the Nilgiri Railway Company and is worked by the Madras Railway Company under the terms of an agreement, dated 26th May 1898, to remain in force for a period of three years from the date on which the line was opened for public traffic, subject to revision on the opening of the extension from Coonoor to Ootacamund. The capital outlay up to 31st December 1901 was Rs. 48,74,254, and the net earnings for 1901 Rs. 1,37,883, giving a percentage 2·83 on the capital outlay.

Nilgiri Railway. *Metre Gauge, 16·90 miles.*

95. The remodelling of the Tanjore junction station was almost completed; the goods station on the Madras Beach was opened for traffic and the receipts were very satisfactory. A causeway at mile 104 to allow flood water to pass over the line was completed on the 31st December 1901. During the year under report the daily-paid men employed in the Engineering Workshops at Trichinopoly struck work from the 3rd to the 8th May owing to their having been dissatisfied with the system of letting out certain works on contract. Their grievances having been enquired into, and satisfactory explanations given, the men accepted the conditions and resumed work. An agreement for working the Pámban and the Travancore branches as part of the South Indian Railway was completed. The number of accidents rose from 309 to 324 and the numbers of persons killed and injured rose from 21 and 33 in 1900 to 34 and 102 respectively in 1901. The figures for 1901 include the accidents on the Travancore and the Pámban branches under construction, which resulted in 10 persons being killed and 60 injured. The number of employés on the 31st December 1901 on the open line were 96 Europeans, 604 Eurasians and 11,834 Natives, making a total of 12,534. The strength and cost of the police force employed on the railway were respectively 207 and Rs. 50,598. The medical staff of the Company consisted of a Superintending Physician, an Assistant Physician and nineteen apothecaries. During the year 1901, 31,250 persons were treated by the Medical department at the Company's hospitals, 5,587 being treated as in-patients. The cost of working the department for the open line, exclusive of the cost of medicines, was Rs. 2,971 per mensem. Railway schools were established at five of the most important stations, one being for natives and the other four for European children. The contribution by Government was Rs. 344 and by the railway, Rs. 4,222. The school fees collected amounted to Rs. 816 and the annual expenditure to Rs. 4,513. At the close of 1901 the balance of the stores account, including Rs. 18,97,233 appertaining to the Pámban Branch Stores, stood at Rs. 44,53,246, while the balance at the close of 1900 was Rs. 23,26,141; the increase of Rs. 21,27,105 was chiefly due to the receipt of permanent-way materials for the Pámban Branch. During the calendar year 1901, 26,588 tons of stores and materials valued at £222,938 were shipped to India besides 353 tons of coke from England at an average cost at port of delivery of £2-4-10 per ton. On 31st December 1901, 155 locomotives, 808 coaching vehicles and 2,944 goods vehicles were in running order. During the year 1901, 136 engines, 543 coaching vehicles and 1,373 goods vehicles were repaired, and 47 engines, 65 coaching vehicles, and 365 goods vehicles were undergoing or awaiting repairs on the last day of the year. The percentage of trains which were late fell from 13·97 to 8·43. From June 1st, 1901, the third-class passenger fares for trains other than the fast mails were revised so as to introduce a uniform method of accounting for fractions, and in the revision the total fares were slightly increased.

South Indian Railway. *Metre Gauge, 1,110·21 miles.*
General.
Accidents.
Persons employed.
Medical department.
Schools.
Stores and materials.
Rolling-stock.
Train service.
Rates and fares.

96. The Máyavaram-Mutupet Railway, which is the property of the Tanjore district board, is worked by the South Indian Railway Company as a part of their system. The balance of the store account rose from Rs. 7,418 at the close of 1900 to Rs. 1,72,281 at the close of 1901. The capital outlay on the line from Máyavaram to Mutupet up to the 31st December 1901 was Rs. 25,51,236, and the net earnings for the calendar year 1901 amounted to Rs. 1,35,765, giving a percentage of 5·32 on capital outlay.

Tanjore District Board Railway. Máyavaram-Mutupet Section. *Metre Gauge, 54·08 miles.*

Peralam-Karaikkal Railway. *Metre Gauge, 14·65 miles.*

97. The Peralam-Karaikkal Railway is owned by the French Government and worked by the South Indian Railway Company as a part of their system under an agreement. The capital outlay on the line up to the 31st December 1901 was Rs. 7,23,786, and the net earnings for the year 1901 amounted to Rs. 13,314, giving a percentage of 1·84 on the capital outlay.

Pondicherry Railway. *Metre Gauge, 7·85 miles.*

98. The Pondichery Railway which is wholly situated in French territory is owned by a Company guaranteed by the French Government and is worked by the South Indian Railway Company. The capital outlay up to the 31st December 1901 was Rs. 5,68,543 and the net earnings for 1901 Rs. 32,366, giving a percentage of 5·69 on the capital outlay.

Bezwada Extension Railway. *5' 6" Gauge, 20·58 miles.*

99. The Bezwada Extension Railway line, extending from Bezwada to the frontier of His Highness the Nizam's territory, is owned by the State and is worked by His Highness the Nizam's Guaranteed State Railway Company (Limited) under an agreement with the State. The capital outlay on this line up to 31st December 1901 was Rs. 11,51,679 and the net earnings Rs. 1,56,929, giving a percentage of 13·63 on the capital outlay.

Lines under construction.

Madras Junction Works. *5' 6" Gauge, 1·93 miles, Rs. 19,96,471.*

100. In consequence of the transfer of the southern section of the late East Coast Railway to the Madras Railway Company certain works have been rendered necessary in Madras. The lowering of the Rayapuram branch was completed and passed by the Government Inspector and certain temporary diversions of the municipal roads have been carried out.

Calicut-Azhikal Extension. *5' 6" Gauge, 59·84 miles, Rs. 78,65,244.*

101. A portion of the Calicut-Azhikal extension from Calicut to Badagara, 29 miles in length, was completed and opened for traffic of all kinds on the 1st October 1901. A further section of 13½ miles from Badagara to Tellicherry was approaching completion at the end of the official year. The earthwork of the remaining portion of the line was well advanced and the bridge-works were progressing satisfactorily. Collection of ballast and permanent-way materials were nearly complete and it is hoped that the line will be opened through to Azhikal by the end of 1902.

Shoranur-Cochin Railway. *Metre Gauge, 64·83 miles, Rs. 58,23,382.*

102. At the close of the official year 1901–1902, the Shoranur-Cochin Railway was nearing completion. A revised estimate of the cost of the line, amounting to Rs. 58,23,382, has been sanctioned by the Secretary of State.

Pámban Branch. *Metre Gauge, 91·33 miles, Rs. 68,90,515.*

103. The Pámban Branch of the South Indian Railway which lies between Madura and Mandapam was practically completed. The excessive rainfall in November and December 1901, retarded the plate-laying operations. A project for extending the railway across the Pámban Pass and on to the island of Rámésvaram is now under preparation.

Travancore Branch. *Metre Gauge, 108·27 miles, Rs. 1,57,71,766.*

104. The extension of the South Indian Railway into Travancore may be divided into three sections—from Tinnevelly to Shencottah, from Shencottah to Punalur, and from Punalur to Quilon. Work on the first 19 miles from Tinnevelly was very near completion at the end of March 1902. On the remaining 31 miles of the first section the banks were approaching completion and the masonry of all the larger bridges had been completed. Owing to delay in the receipt of girders further progress in laying rails was retarded. The second section—30 miles in length—is what may be termed the ghat-section. The banks and cuttings were nearly finished and the tunnelling and bridge-works were being pushed on. All the largest cuttings and banks in the third section, which is 28 miles in length, were nearing completion, and it is proposed to open it independently for traffic from Quilon.

Mutupet-Avadaiyarkoil Extension, Tanjore District Board Railway. *Metre Gauge, 51·48 miles, Rs. 28,25,000.*

105. At present only the length of the Mutupet-Avadaiyarkoil Extension from Mutupet to Arantangi (45 miles) is under construction by the South Indian Railway on behalf of the Tanjore district board. In order to find the necessary capital, the district board endeavoured to raise 20 lakhs of rupees in the form of 4-per cent. debentures but succeeded in raising only Rs. 6 lakhs. Earthwork on the first 30 miles of this extension was completed by the close of the official year 1901–1902 and on the other 15 miles it was more than half finished. Two of the seven major bridges have been completed and the minor bridges are progressing satisfactorily.

106. The Naupada-Parlákimedi Railway, owned entirely by the Rajah of Parlákimedi, was constructed under the Tramways Act to connect Parlákimedi with Naupada station on the Bengal-Nagpur Railway. The line was opened for traffic in April 1901 and the Government of India have since sanctioned the application to it of the provisions of the Indian Railways (Act, IX of 1890), except section 135. It is now worked by the Bengal-Nagpur Railway and has been transferred from the Madras to the Calcutta circle of inspection.

Naupáda-Parlakimedi Branch. *2′ 6″ Gauge, 25 miles, Rs. 6,00,000.*

107. The extension of the Madras Railway from Azhikal to Mangalore occupies the sixth place in the Government of India programme for 1902–1903, and a sum of Rs. 60,775 has been sanctioned for the final location survey and for the preparation of land-plans. The survey is in progress and will be completed before the monsoon. A Deputy Collector with the necessary staff has been appointed and land-acquisition has been commenced. The construction of the line has been sanctioned by the Secretary of State at an estimated cost of Rs. 1,08,62,974.

Lines Surveyed or Projected.
Azhikal-Mangalore Extension. *5′ 6″ Gauge, 77·76 miles, Rs. 1,08,62,974.*

108. During the year the reconnaissance-survey of Salem-Atur branch of the Madras Railway was carried out by the Company at a cost of Rs. 6,211. The report, estimates and plans were submitted to the Government of India in January 1902, and orders have since been received suggesting the construction of the line on the 2′ 6″ gauge if the Madras Railway Company can arrange to finance the line outside the Government of India programme.

Salem-Atur Branch. *5′ 6″ or 2′ 6″ Gauge, 36·06 miles, Rs. 12,72,810.*

109. The Yerragudipad-Jammalamadugu branch is intended to connect the towns of Jammalamadugu and Proddatur on the north bank of the Pennér river in the Cuddapah district with Yerragudipad station on the North-West Line of the Madras Railway. Plans, estimates and report were submitted to the Government of India for this project as a narrow gauge line in March 1901. The Government of India have, in reply, drawn the attention of the Local Government to the advisability of constructing this and other famine protective railways on the gauge of the parent line, and the Madras Railway Company have accordingly been asked if they would be prepared to undertake its construction as a light standard gauge railway and to stock and work it for 30 per cent. of the gross receipts or at actual cost, whichever is less.

Yerragudipad-Jammalamadugu Branch. *5′ 6″ or 2′ 6″ Gauge, 24·05 miles, Rs. 8,92,878.*

110. The question of a railway from Palghat or Pódanúr to Dindigul has been under consideration for many years. The district board, Coimbatore, now consider that it will be in the interest of the district that the portion of the line from Pódanúr to Palni should be taken in hand on its own merits and constructed at an early date without waiting until the whole scheme is ripe for execution. For the construction of this railway the district board, Coimbatore, have resolved to levy a cess of 3 pies in the rupee on the annual rent value of all occupied lands in the district. It is proposed to construct the line on the metre gauge as a branch of the Madras Railway system.

Pódanúr-Dindigul Railway. *Metre Gauge, 97·00 miles, Rs. 58,00,000.*

111. A survey of the Coonoor-Ootacamund extension was first made by the Engineer-in-Chief of the Nilgiri Railway in 1898, but, owing to the opening of a cordite factory at Arvanghat, a revised survey was required, which was carried out by the Madras Railway in October 1901. This survey provides for the Ootacamund terminus at Metucherry, but it was subsequently considered desirable to investigate the possibility of locating the Ootacamund terminus at Charing Cross. With this view the survey of an alternative route to Charing Cross has been carried out from Provincial funds at a cost of Rs. 5,000. The site for the terminal station at Charing Cross has received the approval of the Local Government and of the leading residents and tradespeople of Ootacamund in preference to Metucherry.

Coonoor-Ootacamund Extension. *Metre Gauge, 11·50 miles, Rs. 20,00,000.*

112. The objects of the Marina loop-line in Madras are to relieve the suburban portion of the main line of its congestion of traffic and to provide railway facilities for some of the important and densely-populated suburbs of Madras, such as Adyar, Mylapore, St. Thomé and Chepak. This line would leave the Company's existing station at Saidapet and join the main line at its terminus at the Madras Harbour serving on its route the suburbs noted above. The proposal, containing alternative estimates for a single and for a double line, was forwarded to the Government of India in August 1901. A fresh estimate, embodying the South Indian Railway Board's proposal, to the effect that the line should be opened with

Marina Loop of the South Indian Railway. *Metre Gauge, 8·38 miles, Rs. 14,91,997.*

a single track, but that formation and bridges should be constructed for a double line, was called for. An approximate estimate amounting to Rs. 14,91,997 has since been submitted.

Erode-Nanjangode Connection. *Metre Gauge, 120·75 miles, Rs. 1,23,00,000.*

113. The merits of the Erode-Nanjangode project are that it will form a connecting link between the Southern Mahratta and the South Indian Railways and also the Nilgiri Railway (by a branch from Satyamangalam). It will place Trichinopoly town in direct communication with Mysore and the hill stations on the Nilgiris and will form the shortest route between Bombay and Southern India. The project is allotted the fifteenth place in the order of preference in the programme of the Government of India.

Trichinopoly-Tirukkóyilúr Chord. *Metre Gauge, 96·75 miles, Rs. 74,43,000.*

114. The chord-line from Trichinopoly to Tirukkóyilúr, if constructed, will provide a short cut of 37 miles on the existing route between Trichinopoly and the north. It will serve to cross diagonally the rough quadrangle of about 100 miles square formed by the towns of Jalarpet, Cuddalore, Tanjore and Erode and will also provide means of access to parts of the country liable to famine. Plans, estimates and report of the engineering reconnaissance and a traffic-survey of the line were forwarded to the Government of India in October 1900 and it occupies the twelfth place in the list of railway projects.

Sérmádévi-Nagerkoil Branch. *Metre Gauge, 33·00 miles.*

115. The question of constructing a railway to connect the South Indian Railway with the southern portion of the Nángunéri taluk near Nagerkoil has been under the consideration of the district board, Tinnevelly. It is proposed to start the line at Sérmádévi and run *viâ* Kolladi, Valliyur and Pangudi. The Agent, South Indian Railway, has been asked to submit an estimate for a reconnaissance-survey similar to that made for the Salem-Atur branch of the Madras Railway. The attention of the President of the district board, Tinnevelly, has been drawn to the manner in which the Kistna and Kurnool district boards have proposed to raise the necessary capital for the construction of railways in their districts.

Vaigai Valley Light Railways. *2′ 6″ Gauge, 93·00 miles, Rs. 28,00,000.*

116. The system of railways hitherto known as the Madura District light Railways is composed of the following short lines :—

	MILES
(1) From Ammayanáyakkanúr station of the South Indian Railway to Kotagudi, the foot of the Kanan Devan Hills Produce Company's rope-way, about	55
(2) A branch from Periyakulam, mile 27, to Krishnama Naick's tope, at the foot of the hill road to Kodaikánal, about	5
(3) From near Theni, mile 39, to Uttamapálaiyam, about	18
(4) From Uttamapálaiyam to Karuvanuth, to the foot of the Periyár waterfall and to the Madura district frontier in the Periyár neighbourhood, about	15
Total ...	93

117. The Secretary of State has offered the promoters, Messrs. Wilson & Co., the concession to construct these railways under the provisions of the Railways Act of 1894, instead of under the Tramways Act under which they had first obtained the concession. This change will admit of the payment of interest out of capital during the construction of the lines. The district board of Madura has offered the promoters a yearly contribution of Rs. 200 per mile for seven years if the Company would undertake to maintain in good order the roads over which the railways are to run. The board has also agreed to pay a contribution of $1\frac{1}{2}$ per cent. on the cost of new bridges, provided they are made suitable for carrying ordinary traffic. The promoters have not as yet intimated their acceptance of the Secretary of State's offer and they have been called upon to give a final decision before the end of August 1902.

Kalambur-Padalam Chord. *Metre Gauge about 50 miles.*

118. At the instance of the Agent, South Indian Railway, Government sanctioned a preliminary investigation by a traffic officer of the country from Padalam to Kalambur through Wandiwash and Arni.

Perambalur-Karur Chord. *Metre Gauge.*

119. A preliminary investigation of the country between Perambalur and Karur by a traffic officer of the South Indian Railway has been sanctioned by the Madras Government. This chord-line is intended to serve as a branch of the Trichinopoly-Tirukkóyilúr project.

120. The Kistna district board resolved that a special cess of one pie in the rupee on the annual rent value of all occupied lands for the purpose of constructing railways in the district, should be levied in four taluks which would be directly benefited by the proposed railway from Bezwada to Masulipatam. The district board propose to guarantee to the company to be formed for the construction of the Bezwada-Masulipatam Railway a subsidy not exceeding Rs. 15,000 per annum, with the object of increasing the 3½ per cent. guarantee offered by the Secretary of State for India to 4 per cent. per annum on the capital expended on the railway. The levy of the special cess has been sanctioned by the Local Government, and the President of the district board, has, with the approval ofthe Government of India, been authorised to sign an agreement with the promoters who are granted till 31st March 1903 to float the company.

Bezwada-Masulipatam Extension. *Metre Gauge, 49·50 miles, Rs. 27,89,406.*

121. In May 1901 the Kurnool district board resolved to levy a cess of three pies in the rupee on the land assessment of two of its taluks, viz., Ramallakot and Nandikotkur, for the purpose of constructing a railway. Negotiations with the promoters Colonels Lindsay and Filgate are practically complete, and the President of the district board, has been authorized to sign the agreement on behalf of his board. The district board has agreed to pay for a period of thirty years from the date of the opening of the branch, such sum not exceeding Rs. 10,000 per annum, to the parent company as may be required to raise the net receipts of the branch to a figure sufficient to provide interest at the rate of 4 per cent. per annum on the capital. In return for the offer of this subsidy, the district board is to receive one-half of the excess of profits over 4 per cent. until such time as the whole of the board's outgoings on account of subsidy *plus* arrears at 4 per cent. interest shall have been recouped.

Dhone-Kurnool Branch. *Metre Gauge, 32·00 miles, Rs. 7,10,892.*

122. With a view to avail itself of the presence within the district of the party engaged on the survey of the Bezwada-Masulipatam Branch, the district board of Kistna resolved in December 1901 to have a survey made for a light railway from Guntúr to Ponnur and Répalle. The proposal received the approval of Government and the survey was entrusted to the Southern Mahratta Railway administration. In order to meet the cost of the survey and the payment of interest on capital to be raised for the construction of the branch line, the district board resolved to levy a cess of three pies in the rupee on all occupied lands in the Tenali and Guntúr taluks except the Mangalagiri division, with effect from 1st July 1902. This resolution requires confirmation after six months.

Guntúr to Ponnur and Répalle. *Metre Gauge, 46·00 miles.*

123. The Berhampur-Russellkonda branch is intended to run from Berhampur through Aska and Goomsur to Russellkonda and to open up the rich Rushikulya valley. The branch, when constructed, will form a valuable feeder to that part of the late East Coast Railway that is now being worked by the Bengal-Nagpur Railway. It lies in the Madras Presidency but not in the Madras Circle of inspection.

Berhampur-Russellkonda Branch. *5′ 6″ or 2′ 6″ Gauge, 49·00 miles, Rs. 14,91,000.*

124. The Mysore-Tellicherry line will connect at Tellicherry with the Calicut-Azhikal standard gauge line which is an extension of the Madras Railway. The final survey has been completed and the report, estimate and plans have been forwarded to the Government of India. The estimated cost of constructing this branch line is Rs. 74,12,217, or Rs. 51,228 per mile.

Mysore-Tellicherry Railway. *2′ 6″ Gauge, 144·69 miles, Rs. 74,12,217.*

125. The Arsikere-Mangalore Railway consists of a metre gauge-branch of the Southern Mahratta Railway from Arsikere to Hassan (28·71 miles) and a 2′ 6″ gauge line from Hassan to Mangalore (107 miles), including the ghât section of 26·67 miles. The estimated cost of this railway is Rs. 85,43,784, or Rs. 62,956 per mile. The final surveys have been completed and the report, estimate and plans have been forwarded to the Government of India

Arsikere-Mangalore Railway. *2′ 6″ Gauge, 107·00 miles, Metre Gauge, 28·71 miles.*

126. The projected line from Vizianagram to Raipur, though not entirely under the administration of this Government, is one in which the Madras Presidency is largely interested. Of the projected line 133 miles lie in the Madras Presidency and the remaining 226 miles in the Central Provinces. It has been allotted the 9th place in the Government of India's order of preference.

Vizianagram-Raipur Railway. *5′ 6″ Gauge, 359·00 miles, Rs. 3,15,00,000*

127. In addition to these railways six lines have been projected as famine protective railways. Detailed surveys have been carried out and reports and estimates have been submitted to the Government of India. The question of gauge has not yet been settled, but of the three lines which take off the Southern Mahratta

Six Famine Protective Lines.

Railway, viz., the Bellary-Rayadrug, the Hospet-Kottur and the Phirangipuram-Gurzala and of the one line which takes off the South Indian Railway, viz., the Kalikiri-Royachoti, it may safely be predicted that the metre gauge will be adopted. As regards the other two lines, viz., the Morapur-Dharmapuri and the Tiruppattur-Krishnagiri, the question of adopting the gauge of the parent line is now, at the instance of the Government of India, under consideration with the Agent and Manager, Madras Railway.

Madras Electric Tramways.

128. The route-mileage of the Madras Electric Tramways was 9 miles 2½ furlongs, 2 miles 6 furlongs of which is double track. There were at the power-station 2 Burnly horizontal engines of 200 H.P. each, and 2 Willian's engines, one of 200 H.P. and the other of 100 H.P. The stock included 37 single motor cars, 2 double motor cars and 2 trailers, and the average daily service was 35. There was a 10 minutes service on all sections except No. II (Custom House to Barber's Bridge) which was found to warrant a 7½ minutes service as it ran through very busy localities. The line equipment was the overhead trolley system throughout, with centre poles along the double track portion and side poles on the single track. During the year, 5,483,577 passengers were carried. Three extensions are proposed, one from the existing terminus at Royapettah, along the Royapettah High Road and Cutcherry Road to terminate at Bazaar Street, Mylapore, the second from Pachaiyappa's College along China Bazaar Road to join the existing tramway at Elephant Gate, and the third along Mint Street to terminate near Washermenpet Railway Station.

PUBLIC WORKS—CANALS. (1901-1902.)

129. The canals on which navigation was carried on during the year were the Chilka lake canal, the Dumagudem canal, the Gódávari canals, the Kistna canals, the Buckingham canal, the Kurnool-Cuddapah canal and the Vedaranniyam canal. The ton-mileage and value of goods increased in the case of the Gódávari canals and the Buckingham canal, in the former case on account of the non-interruption of traffic by floods such as occurred in previous years, and in the latter case, on account of the heavy traffic in salt. The decrease under these heads on the Dumagudem and the Kistna canals is attributed to their low state. The decrease on the Kurnool-Cuddapah canal was due to a decline in the imports of food-grains during the year. The gross ton-mileage on all the canals rose from 28,864,793 to 29,479,665 and the value of goods from Rs. 4,50,50,537 to Rs. 6,67,24,001. The number of passengers fell from 567,898 to 563,584.

IRRIGATION. (1901-1902.)

[*Administration Report of the Irrigation Branch of the Public Works Department in the Madras Presidency for the year 1901-1902.*]

Gross Expenditure and Revenue.

130. Irrigation works are divided into five classes: Class I includes major productive and protective works; class II minor works and irrigation for which capital and revenue accounts are kept; classes III and IV comprise minor works for which neither capital nor revenue accounts are kept; and class V includes agricultural works. The gross expenditure on irrigation works fell from Rs. 55,59,736 in 1900-1901 to Rs. 54,72,980, but the area irrigated, including first and second crops, rose from 6,600,124 acres to 6,884,554 acres and the revenue advanced from Rs. 2,22,14,793 to Rs. 2,34,54,885. While 3,334,518 acres were irrigated from works in classes III and IV and 2,981,672 acres from works in class I, more than half the gross revenue (Rs. 1,28,25,999) was derived from the irrigation under works in class I, while the revenue from works in classes III and IV was Rs. 85,52,893.

Major Productive and Protective works.

131. The Rushikulya project is the only protective work in the Presidency. During the year Rs. 50,888 were spent on it from capital account, bringing the total charges up to Rs. 48,38,030, while the estimated cost of construction is Rs. 48,53,292. The charges against revenue account fell from Rs. 82,783 in 1900–1901 to Rs. 71,258, and net revenue rose from Rs. 10,946 to Rs. 34,696; if allowance is made for charges for interest, the loss during the year was Rs. 1,41,719. The principal works in progress during the year in this project were the improvement of the head-sluice and the extension and improvement of the surplus weir of the Surada reservoir, the improvement of the Janamalli anicut, the excavation of two channels and the extension of a distributary. During the year, Rs. 7,52,440 were expended from capital account on eight productive works, bringing the total charges up to Rs. 6,89,28,596, while the estimated cost of constructing them was Rs. 7,07,08,297. Over two and-a-half lakhs of rupees were spent on the Kistna delta, over two lakhs on the Cauvery delta and Rs. 1,30,392 on the Pennéru river canals. The charges against revenue on account of productive works fell from Rs. 19,55,168 in 1900–1901 to Rs. 19,28,867 and the net revenue rose from Rs. 61,72,075 to Rs. 65,84,594, or 9·55 per cent. on the capital. If allowance is made for charges for interest, the profit derived during the year amounted to Rs. 40,20,490 or 5·83 per cent. on the capital spent on the works; if the Kurnool-Cuddapah canal were excluded, this percentage would be increased to 10·17.

Capital Account.

132. Of the total outlay of capital during the year Rs. 1,44,938 were spent on head-works, Rs. 1,87,387 on main canals and branches, Rs. 1,63,431 on distributaries, and Rs. 1,09,548 on drainage and protective works. The principal works in progress during the year, included under "(1) Head Works," were the construction of a new head-sluice at Bezwada in the Kistna delta system, and the remodelling the Upper Coleroon anicut, Cauvery delta system. The works comprised under "(2) Main Canals and Branches" included two diversions of the bank canal and the construction of the new Allaram aqueduct of the Bendamurlanka canal in the Gódávari delta system, the construction of a wharf wall at Ellore in the Ellore canal, the excavation of the Kollur side channel and its branches and a lock at 11th mile, Bank canal, in the Kistna delta system, the excavation of a supply channel from a Pennér above the Sangam anicut to the Nellore tank and improvements to the Kanigiri reservoir bund in the Pennér river canals system, the conversion of the Cauvery-Kodamurti and the Cauvery-Veerasholan dams into regulators and the improvement of the Arasalar-Nattar regulators in the Cauvery delta system, and the erection of falling shutters at the Peranai anicut in the Periyár project. The chief works included under "(3) Distributaries" which were in progress were the construction of the Tungabhadra side-channel and its branches, and of the Vellattur channel and its branches in the Kistna delta system and the improvement of the Vadagarai tank and of the Kunnathore tank and channel of the Varichiyur tank in the Periyár project. Under "(4) Drainage and Protective works," the excavation of short cut to the Yenamadurru drain and the construction of an under-tunnel in the Narasapur canal in the Gódávari delta system, the excavation of the Pundla drain in the Kistna delta system, and the diversion of the surplus water from the Kanigiri reservoir into the Pyderu on the Pennér river canals system were in progress, and the railway bridge over the Perali drain and excavation of Nallamada and Perali drains, Kistna delta system, were completed during the year under report.

Revenue Account.

133. The gross working expenses of the Rushikulya project fell from Rs. 82,783 in 1900–1901 to Rs. 71,258, and those of productive works fell from Rs. 24,49,980 to Rs. 24,25,468. The area irrigated by major works and the revenue derived from them during the year show, as compared with 1900–1901, an increase under all the systems except the Srívaikuntam anicut system. The increase is due generally to the more favourable character of the season. That under the Gódávari and Kistna deltas occurred in the first crop and there was a decrease in the second crop chiefly under the head "dry converted into wet and dry crops watered and miscellaneous" under Government and under zamindari and inams irrigated and charged. The remissions granted during the year under these systems amounted to Rs. 32,638 and Rs. 9,788, respectively, while they were Rs. 1,52,091 and Rs. 11,665 in the previous year. In the Pennér river canals there was an increase chiefly in the first crop which was due partly to the extension of the irrigation under the Sangam project to a village in the Nellore taluk during the year. The increase under the Kurnool-Cuddapah canal occurred chiefly in the Kurnool district under dry crops and was due to deficient rainfall which caused a brisk demand for canal-water for

crops on dry land. Under the Cauvery delta there was an increase chiefly under second crop and only Rs. 8,075 were remitted during the year against Rs. 14,823 in the previous year. The increase under the Periyár and Rushikulya projects was due to extension of irrigation. The decrease under the Srívaikuntam anicut occurred chiefly under second crop and was due to the unfavourable character of the north-east monsoon in the Tinnevelly district. The only important works on the Gódávari delta system, the cost of which was charged against revenue, were the improvement of the Teki and Anaparti drains and the construction of a new set of lower gates to Tallavaram lock. On the Pennér river canals system the principal works carried out were the special repairs to the Kanigiri and Jaffer Sahib canals. On the other systems the works carried out were not of any special interest.

Minor works for which Capital and Revenue Accounts are kept.

134. Two minor orks, for which capital and revenue accounts are kept, were sanctioned during the year, namely, the Vamula and Yerur tank projects. All the works in this class were in operation except these two works, the Chepad project, the Ganjám-Gopalpore canal, the Ponnalur tank project, the Jangamaheswarapuram project and the Hajipuram project. The estimates for the construction of the Muneyeru, Dondapad and Sagileru projects and the Lower Coleroon anicut system have not yet been closed. The amount of capital spent on works in this class during the year was Rs. 2,46,290, bringing the total amount of capital spent on them up to Rs. 1,00,35,858. The principal items of expenditure were Rs. 1,33,479 on the Chepad project and Rs. 56,226 on the Lower Coleroon anicut system. The area irrigated by the works rose from 511,603 acres in 1900–1901 to 568,364 acres and the revenue due to improvements from Rs. 7,99,734 to Rs. 10,14,242. The working expenses on improvements advanced from Rs. 2,90,896 in 1900–1901 to Rs. 3,11,828 and the net revenue therefore increased from Rs. 5,08,838 to Rs. 7,02,414, of which Rs. 2,36,450 was derived from the Lower Coleroon anicut system. The area irrigated under the Pálár anicut system rose from 75,988 acres in 1900–1901 to 102,311 acres and the revenue from Rs. 38,373 to Rs. 1,56,117; the net revenue derived from the system was Rs. 89,266.

Minor works for which neither Capital nor Revenue Accounts are kept.

135. The outlay on ordinary and minor works, for which neither capital nor revenue accounts are kept, was Rs. 8,39,155 by the Public Works department and Rs. 81,703 by the Revenue department; old maintenance charges amounted to Rs. 4,80,897 and the sum expended on the restoration of tanks was Rs. 3,95,207. Of the total amount (Rs. 17,96,962), Rs. 3,24,075 were spent on original works, Rs. 9,22,819 on repairs and Rs. 5,31,831 on establishments. The expenditure occurred mainly in Tanjore (Rs. 3,42,562), Chingleput (Rs. 2,35,059), South Arcot (Rs. 1,83,809), North Arcot (Rs. 1,76,677), Tinnevelly (Rs. 1,68,282), and Nellore (Rs. 1,49,517). The area irrigated by these works rose from 3,173,250 acres in 1900–1901 to 3,334,518 acres, and the revenue from Rs. 79,85,620 to Rs. 85,38,570. The total revenue, including the miscellaneous revenue collected in the Public Works department, was Rs. 85,52,893, and the total charges were Rs. 30,05,435, viz., Rs. 25,86,441 in the Public Works department and Rs. 4,18,994 in the Revenue department, leaving Rs. 55,47,458 as the net revenue.

Tank Restoration Scheme.

136. The total area of minor basins entered upon at the beginning of the year was 52,416 square miles, of which 45,459 square miles had been completed. These figures were, during the year under report, increased by 2,604 square miles and 4,385 square miles respectively, thus bringing the totals to 55,020 square miles entered upon and 49,844 square miles investigated. The average area of cultivation under all works in the Presidency to be investigated under the Tank Restoration Scheme [class IV (*a*) and (*b*) works] during the ten years 1890–91 and 1899–1900 is calculated to be about two and-a-quarter millions of acres. Of this acreage works commanding about 0·8 million of acres of irrigation have been investigated under the Tank Restoration Scheme up to the 31st March 1902, leaving a balance of works commanding an area of 1·45 millions of acres of irrigation to be investigated on that date. This gives a rough indication that the work completed is about 35 per cent. of the work to be done in the Presidency. The aggregate amount of estimates sanctioned for Government works fell from Rs. 4,71,252 in 1900–1901 to Rs. 3,75,174. The cost of investigation during the year was Rs. 61,422 or 16·37 per cent. of the amount of the estimates sanctioned. The total amount of estimates sanctioned for Government works from the beginning of the operations under the Tank Restoration Scheme up to the end of the year was Rs. 69,05,506, while the total expenditure incurred on works was Rs. 56,19,314 or Rs. 69,84,127 including charges for establishment and tools and plant.

137. The outlay on agricultural works, *i.e.*, river conservancy and river embankments, amounted to Rs. 7,28,777, of which Rs. 1,33,184 were spent on original works, Rs. 4,55,269 on repairs and Rs. 1,31,597 on establishment.

Agricultural works. Investigation of Projects.

138. The projects which were under investigation during the year by the ordinary establishment included distributaries of the Rushikulya project, the Godakanalla project and the Baruva river projects in Ganjám division, the improvement of irrigation works in Palkonda taluk in Vizagapatam division, and the Mopad reservoir project and the Gundlacama reservoir project in Nellore division. The investigation of the Hindupur project in Cuddapah division, and the plans and estimates for the Velgode and Thokapalli projects in the Kurnool division were completed. As it was considered desirable to inquire fully into the nature of the rock at the site of the proposed Thokapalli reservoir, and the condition of the wells likely to be affected by the project, further investigation was in progress. Under the orders of the Government of India, an officer was placed on special duty to prepare materials for the Irrigation Commission. The sanction of the Government of India was then obtained to the investigation of some smaller works which were considered very important from a famine protective point of view, and regarding which it was thought unnecessary to await the Commission's inquiry. Three parties were started, one in Nellore to investigate the Gundlacama reservoir project and the rivers north of Nellore, another in Trichinopoly to investigate the Nandyar reservoir project and the third in Kurnool. Great difficulty was experienced in finding officers and subordinates for the work, so that when the official year expired very little progress had been made in investigation.

Famine Relief.

139. Owing to the failure of the north-east monsoon, some irrigation works were undertaken on the intermediate system in the Cuddapah division with satisfactory results. Works were likewise opened in certain taluks of the North Arcot division with equally satisfactory results.

Estate works executed by the Public Works Department.

140. The outlay on irrigation works, carried out by the Public Works department in the estates under the charge of the Court of Wards, was Rs. 2,075 in the Bodogada estate and Rs. 115 in the Shergada estate in Ganjám division, and Rs. 8,906 in the Kasimkota estate in Vizagapatam division.

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

CHAPTER V.

REVENUE AND FINANCE. (1901-1902.)

(*a*) GROSS REVENUE.

Receipts and expenditure.

1. The following statements exhibit under major heads the receipts and charges on account of Imperial, Provincial and Local Funds during each of the past two years :—

Imperial, Provincial and Local Fund Receipts.

Major head of account.	Imperial.		Provincial.		Local.		Total.		Increase in 1901-1902.
	1900-1901.	1901-1902.	1900-1901.	1901-1902.	1900-1901.	1901-1902.	1900-1901.	1901-1902.	
Principal heads of Revenue.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
I. Land revenue ...	4,01,26,495	3,58,42,337	1,55,46,731	2,01,13,824	25,95,252	27,84,055	5,82,68,478	5,87,40,216	+ 4,71,738
III. Salt	1,85,20,445	1,90,50,490	1,05,744	1,03,132	...	...	1,86,26,189	1,91,53,622	+ 5,27,433
IV. Stamps	21,41,436	21,72,282	64,24,309	65,16,847	...	...	85,65,745	86,89,129	+ 1,23,384
V. Excise	1,01,90,548	1,07,31,506	33,96,850	35,77,168	...	...	1,35,87,398	1,43,08,674	+ 7,21,276
VI. Provincial rates ...	...	...	...	...	85,00,477	87,49,382	85,00,477	87,49,382	+ 2,48,905
VII. Customs	36,59,477	45,94,101	92,039	94,063	...	...	37,51,516	46,88,164	+ 9,36,648
VIII. Assessed taxes—									
Civil	13,79,172	14,34,192	13,79,173	14,34,192	...	...	27,58,345	28,68,384	+ 1,10,039
Public Works department ...	40,732	41,393	...	...	...	...	40,732	41,393	+ 661
IX. Forest	11,70,085	12,71,715	11,70,085	12,71,715	...	...	23,40,170	25,43,430	+ 2,03,260
X. Registration	7,23,794	7,25,240	7,23,793	7,25,241	...	...	14,47,587	14,50,481	+ 2,894
XI. Tributes	45,07,902	45,07,902	...	...	...	...	45,07,902	45,07,902	...
XII. Interest	3,04,117	2,98,207	2,35,404	2,35,698	69,482	79,876	6,09,003	6,13,781	+ 4,778
XIII. Post office	...	...	1	33	...	...	1	33	+ 32
Receipts by Civil Department.									
XVI. Law and Justice—									
A. Courts of Law.	...	...	7,31,181	7,55,300	19,748	24,311	7,50,929	7,79,611	+ 28,682
B. Jails	...	...	6,21,099	5,70,703	...	...	6,21,099	5,70,703	— 50,396
XVII. Police	...	...	5,52,139	5,76,247	...	...	5,52,139	5,76,247	+ 24,108
XVIII. Marine	...	...	20	...	...	...	20	...	— 20
XIX. Education	...	...	1,88,902	2,13,629	2,37,721	2,53,715	4,26,623	4,67,344	+ 40,721
XX. Medical	...	...	1,22,539	1,19,974	53,677	57,525	1,76,216	1,77,499	+ 1,283
XXI. Scientific and other minor departments.	...	...	4,85,546	5,56,685	...	...	4,85,546	5,56,685	+ 71,139
Miscellaneous.									
XXII. Superannuation, etc.	90,297	99,827	53,807	66,159	219	218	1,44,323	1,66,204	+ 21,881
XXIII. Stationery and printing	15,491	1,927	87,647	89,353	...	...	1,03,138	91,280	— 11,858
XXV. Miscellaneous ...	40,778	27,472	2,30,199	2,21,133	5,17,398	5,91,771	7,88,375	8,40,376	+ 52,001
XXVI. State railways (gross earnings)	1,70,28,667	1,71,80,160	...	...	2,42,502	2,97,287	1,72,71,169	1,74,77,447	+ 2,06,278
Revenue from Productive Public Works.									
XXIX. Irrigation and navigation (direct receipts).	3,73,326	3,94,996	...	...	...	...	3,73,326	3,94,996	+ 21,670
Receipts from Public Works not classified as Productive.									
XXX. Irrigation and navigation by—									
Public Works department ...	...	...	1,47,534	1,49,933	...	...	1,47,534	1,49,933	+ 2,399
Civil officers ...	...	...	13,767	12,781	...	...	13,767	12,781	— 986
XXXI. Military works ...	3,428	4,634	...	...	...	...	3,428	4,634	+ 1,206
XXXII. Civil buildings and roads by Public works department.	...	...	1,68,921	1,76,686	7,295	7,847	1,76,216	1,84,533	+ 8,317
Civil officers ...	...	...	18,275	9,795	11,32,514	11,80,033	11,50,789	11,89,828	+ 39,039
Contribution from—									
Provincial to Local	...	...	...	...	2,64,387	3,01,341	2,64,387	3,01,341	+ 36,954
Local to Provincial	...	...	3,45,141	2,65,243	...	...	3,45,141	2,65,243	— 79,898
Local to Local	...	...	...	...	6,236	5,358	6,236	5,358	— 878
Total ... Civil	8,28,70,037	8,07,57,198	3,25,24,391	3,75,28,915	1,33,97,111	1,40,27,585	12,87,91,539	13,23,13,698	+ 35,22,159
Total ... Non-civil	1,74,46,153	1,76,21,183	3,16,455	3,26,619	2,49,797	3,05,134	1,80,12,405	1,82,52,936	+ 2,40,531
Excluded Local funds.	...	...	...	...	1,0,09,459	13,12,945	10,03,459	13,12,945	+ 3,03,486
Postal department ...	1,62,44,389	1,73,29,019	...	...	...	...	1,62,44,389	1,73,29,019	+ 10,84,630
Telegraph department.	7,42,324	7,21,736	...	...	...	...	7,42,324	7,21,736	— 20,588
Grand Total ...	11,73,02,903	11,64,29,136	3,28,40,846	3,78,55,534	1,46,56,367	1,56,45,664	16,48,00,116	16,99,30,334	+ 51,30,218

Imperial, Provincial and Local Fund Charges.

Major head of Charges.	Imperial.		Provincial.		Local.		Total.		Increase in 1901-1902.
	1900-1901.	1901-1902.	1900-1901.	1901-1902.	1900-1901.	1901-1902.	1900-1901.	1901-1902.	
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1. Refunds and drawbacks	1,95,265	2,69,377	1,15,283	1,32,707	11,522	42,612	[illegible]07	4,44,696	+ 1,22,626
2. Assignments and compensations	11,52,717	11,41,311	...	...	...	...	11,52,	11,41,311	— 11,406
3. Land revenue	...	...	52,70,080	52,86,610	49,62,165	50,34,633	1,02,32,243	[illegible]21,243	+ 89,000
5. Salt	16,76,274	16,40,078	3,98,947	3,93,982	...	...	20,75,220	20,[illegible]1,060	— 41,160
6. Stamps	90,778	85,321	2,42,333	2,55,964	...	...	3,33,111	3,41,285	+ 18,174
7. Excise	7,54,702	7,48,424	2,51,568	2,49,474	...	...	10,06,270	9,97,898	— 8,372
9. Customs	...	...	2,73,551	2,75,087	...	...	2,73,551	2,75,087	+ 1,536
10. Assessed taxes	15,254	15,477	15,254	15,478	...	...	30,508	30,955	+ 447
11. Forest	8,57,715	8,21,788	8,57,716	8,21,787	...	...	17,15,431	16,43,575	— 71,856
12. Registration	4,31,976	4,37,762	4,31,976	4,37,762	...	...	8,63,952	8,75,524	+ 11,572
13. Interest on ordinary debt	...	76	1,79,585	1,80,144	...	...	1,79,585	1,80,220	+ 635
14. Interest on other obligations	25,823	17,745	...	...	964	3,146	26,787	20,891	— 5,896
15. Post office	...	...	1,04,779	1,05,596	...	...	1,04,779	1,05,596	+ 817
18. General administration	2,62,744	2,83,162	10,07,261	10,27,329	3,01,035	3,14,892	15,71,040	16,25,383	+ 54,343
19. Law and Justice—									
A. Courts of Law	...	...	47,92,300	47,73,093	...	...	47,92,300	47,73,093	— 19,207
B. Jails	...	...	13,54,260	13,75,978	...	...	13,54,260	13,75,978	+ 21,718
20. Police	...	...	46,84,328	47,80,941	...	...	46,84,328	47,80,941	+ 96,613
21. Marine	...	...	10,327	13,265	...	...	10,327	13,265	+ 2,938
22. Education	...	...	17,68,188	18,26,349	10,25,645	10,43,337	27,93,833	28,69,686	+ 75,853
23. Ecclesiastical	3,43,017	3,49,374	...	...	...	...	3,43,017	3,49,374	+ 6,357
24. Medical	...	...	13,43,957	13,02,332	15,16,739	16,28,521	28,60,696	29,30,853	+ 70,157
25. Political	26,153	15,242	74,916	77,049	...	...	1,01,069	92,291	— 8,778
26. Scientific and other minor departments.	62,954	1,95,635	6,70,427	6,89,155	...	...	7,33,381	8,84,790	+ 1,51,409
27. Territorial and political pensions	5,88,540	5,77,485	...	...	...	...	5,88,540	5,77,485	— 11,055
28. Civil furlough	539	9	...	...	...	...	539	9	— 530
29. Superannuation	31,135	37,884	17,39,204	17,59,343	45,077	51,208	18,15,476	18,48,435	+ 32,959
30. Stationery and printing	3,98,742	80,670	9,93,622	9,28,264	1,03,300	73,571	14,95,664	10,82,505	— 4,13,159
32. Miscellaneous	38,597	48,290	1,72,460	1,89,474	2,92,234	2,99,824	5,03,891	5,37,588	+ 33,697
33. Famine relief ... Civil Offices	...	...	7,202	12,898	...	...	7,202	12,898	+ 5,696
33. Famine relief ... P.W.D.	...	...	1,05,695	36,439	48,638	...	1,54,333	36,439	— 1,17,894
35. Irrigation Works	38,525	1,05,918	...	...	...	...	38,525	1,05,918	+ 67,393
38. State Railways (working expenses)	95,70,065	96,20,646	...	...	1,35,869	1,63,106	97,05,934	97,83,751	+ 77,817
39. Guaranteed companies	1,35,439	1,64,102	...	...	...	...	1,35,439	1,64,102	+ 28,663
46. Subsidised Companies—Land, &c.	57,171	162	...	...	...	...	57,171	162	— 57,009
41. Miscellaneous railway expenditure	83,678	1,73,308	...	...	...	...	83,678	1,73,308	+ 89,630
42. Irrigation and navigation	15,48,187	14,83,514	...	...	...	...	15,48,187	14,83,514	— 64,673
45 A. Construction of railways, &c.	...	—12,34,720	...	...	...	2,39,115	...	— 9,95,605	— 9,95,605
Working and Maintenance. Expenditure—Public Works Department not classed as productive.									
43. Irrigation and navigation—									
By public works officers	...	...	30,28,801	31,28,943	2,697	4,116	30,31,498	[illegible]31,33,059	+ 1,01,561
By civil officers	...	...	4,60,820	4,25,109	...	...	4,60,820	4,25,109	— 35,711
44. Military works	78,642	83,647	...	...	...	...	78,642	83,647	+ 5,005
45. Civil works in charge of—									
Public works officers	63,594	80,360	23,71,219	26,90,526	35,457	38,313	24,70,270	28,04,199	+ 3,33,929
Civil officers	...	...	1,71,353	2,87,923	42,70,559	43,05,946	44,41,912	45,93,869	+ 1,51,957
38. State Railways—Interest capital deposited by companies	...	...	...	...	...	40,549	...	40,549	+ 40,549
State railways—interest chargeable against companies on advances	...	...	...	...	...	49,389	...	49,389	+ 49,389
Capital Expenditure on Public Works Department not charged against Revenue.									
48. State Railways	45,41,223	89,75,979	...	...	...	...	45,41,223	89,75,979	+ 44,34,756
49. Irrigation works	8,32,857	7,08,736	...	...	...	...	8,32,857	7,08,736	— 1,24,121
Contribution Provincial to Local	...	...	2,64,386	3,01,341	...	...	2,64,386	3,01,341	+ 36,955
Contribution Local to Provincial	...	...	...	...	3,45,142	2,65,243	3,45,142	2,65,243	— 79,899
Contribution Transfers between Local to Loca	...	...	...	...	6,236	5,357	6,236	5,357	— 879
Total Civil	69,42,925	67,65,110	2,76,56,143	2,79,24,434	1,28,81,216	1,30,68,290	4,74,80,283	4,77,57,834	+ 2,77,551
Total Non-civil	1,69,49,382	2,01,61,651	55,05,716	58,55,908	2,22,661	5,29,588	2,26,77,759	2,65,47,147	+ 38,69,388
Excluded Local Funds	...	...	...	...	13,11,465	9,91,740	13,11,465	9,91,740	— 3,19,725
Charges of the Postal department	2,31,47,357	2,22,50,245	...	...	...	...	2,31,47,357	2,22,50,245	— 8,97,112
Charges of the Telegraph department	6,58,542	7,05,232	...	...	...	...	6,58,542	7,05,232	+ 46,690
Total Expenditure	4,76,98,206	4,98,82,238	3,31,61,859	3,37,80,342	1,44,15,342	1,45,89,618	9,52,75,406	9,82,52,198	+ 29,76,792
Surplus (+) or Deficit (—). Imperial	+6,96,04,697	+6,65,46,898	...	...	...	...	+6,96,04,697	+6,65,46,898	— 30,57,799
Surplus (+) or Deficit (—). Provincial	...	...	— 3,21,013	+ 40,75,191	...	...	— 3,21,013	+ 40,75,191	+ 43,96,204
Surplus (+) or Deficit (—). Incorporated Local	...	...	...	...	+ 5,43,031	+ 7,34,841	+ 5,43,031	+ 7,34,841	+ 1,91,810
Surplus (+) or Deficit (—). Excluded Local	...	...	...	...	— 3,02,006	+ 3,21,205	— 3,02,006	+ 3,21,205	+ 6,23,211
Total Surplus or Deficit	+6,96,04,697	+6,65,46,898	— 3,21,013	+ 40,75,191	+ 2,41,025	+ 10,56,046	+6,95,24,709	+7,16,78,135	+ 21,53,426
Grand Total	11,73,02,903	11,64,29,136	3,28,40,846	3,78,55,533	1,46,56,367	1,56,45,664	16,48,00,115	16,99,30,333	+ 51,30,218

2. Including the service receipts and charges of the Civil and Public Works departments and of the Excluded Local funds, and the sums issued to and received from the Postal and the Telegraph departments as they appear in the treasury accounts, but excluding all figures relating to Debt and Foreign transactions, the gross revenue of the Presidency rose from Rs. 16,48,00,116 in 1900–1901 to Rs. 16,99,30,333 and the gross expenditure from Rs. 9,52,75,407 to Rs. 9,82,52,198; the figures for the year 1901–1902 are however subject to alteration until the Revenue and Finance accounts are made up by the Comptroller General. The gross revenue was higher than in any of the previous four years and the expenditure was higher than in any of the previous three years but not so high as in 1897–98 (Rs. 10,06,59,591).

Surplus revenue.

3. The surplus of the year under report (Rs. 7,16,78,135) shows a net improvement of Rs. 21½ lakhs over that of the previous year which is the result of an increase of Rs. 51¼ lakhs in revenue and receipts and an increase of Rs. 29¾ lakhs in expenditure. Among the receipts, the largest increase occurred in the Civil department (Rs. 35¼ lakhs) and was due mainly to improvement in the season and to the collection of arrears of land-revenue as well as to larger realizations on account of Customs, consequent chiefly upon a general revival of the import-trade. In the Public Works department there was an increase of Rs. 2½ lakhs in the traffic earnings of railways and the Postal department contributed an increase of Rs. 10¾ lakhs. The increase in expenditure on the other hand occurred almost entirely in the Public Works department, chiefly on account of construction of railways. This was partly counterbalanced by a decrease in expenditure in the Postal department. The surplus in Provincial and Local funds not included in these figures rose from Rs. 2,22,018 in 1900–1901 to Rs. 48,10,032.

Opening and closing balances.

4. The cash balances, which stood at Rs. 271¼ lakhs on the 1st April 1901, rose to Rs. 299¼ lakhs on the 31st March 1902; the balances in the Branch Reserve treasury (Rs. 50,02,443), in district treasuries (Rs. 2,09,18,301) and in the Bank of Madras (Rs. 24,55,468) rose by Rs. 2,20,376, Rs. 34,26,374 and Rs. 1,81,680 respectively; but the balance in branches of the Bank (Rs. 15,49,097) fell by Rs. 10,24,251. The increase in the cash balances was due mainly to the larger collections of revenue in the closing months of the year than in the corresponding months of the previous year.

Remittances to other provinces.

5. The total remittances from Madras fell from Rs. 7511 akhs to Rs. 659¾ lakhs, but the total remittances received also fell from Rs. 217½ lakhs to Rs. 64¾ lakhs; the net amount sent from Madras rose therefore from Rs. 533½ lakhs to Rs. 595 lakhs. There was an increase of Rs. 16½ lakhs in the Council bill payments of the year (Rs. 425 lakhs) and a decrease of Rs. 107¾ lakhs in the remittances to other presidencies and provinces. The value of bills and wire-transfers by Bombay fell from Rs. 92½ lakhs in 1900–1901 to Rs. 14 lakhs and transfers to currency declined from Rs. 180 lakhs to Rs. 105 lakhs. The specie-remittance of Rs. 10 lakhs in the year under report was entirely to Coorg, to meet supply-bills and wire-transfers issued in favour of the planting community. In the previous year also the whole remittance of Rs. 10½ lakhs was sent to Coorg. The considerable increase in the remittance of uncurrent silver from Rs. 2½ lakhs to Rs. 45 lakhs was due to the withdrawal from circulation of the whole and half-rupees of 1840 and their remittance to the mints. Of the remittance of Rs. 4½ lakhs in small silver sent to other provinces, one lakh of rupees in half-rupees and Rs. 2½ lakhs in quarter-rupees were sent to Calcutta; the balance was sent to Coorg in half, quarter and one-eighth rupees. No remittances in small silver coin were received from other provinces during the year under report. The decrease in remittances to Madras was mainly due to the fall from Rs. 185 lakhs to Rs. 30 lakhs in transfers through currency; bills and wire-transfers on Calcutta fell from Rs. 22 lakhs to Rs. 6½ lakhs but those on Bombay rose from Rs. 4 lakhs to Rs. 25 lakhs.

Money.
Currency notes.

6. During the year under report district treasuries remitted to the reserve treasury at Madras surplus non-issuable notes aggregating Rs. 25¼ lakhs while the amount so remitted in the previous year was Rs. 16¼ lakhs. On the other hand fresh currency-notes to the value of Rs. 4 lakhs were remitted from the reserve treasury to district treasuries; the total amount sent in the previous year was Rs. 4½ lakhs. Surplus and non-issuable notes were also remitted from the district temporary currency-chests to the currency-office as currency-remittances;

these amounted to Rs. 117¼ lakhs but in the previous year such remittances aggregated Rs. 145 lakhs. Fresh currency-notes to the value of nearly Rs. 22½ lakhs were remitted from the currency-office in Madras as currency-remittances to the district temporary currency-chests to be utilized as needed in the treasuries; the amount so remitted in the previous year was nearly Rs. 20¾ lakhs. As regards the movement of whole rupees a remittance of Rs. 8 lakhs was sent to the reserve treasury from Bangalore in the year under report, while no direct remittances from the mufassal treasuries to the reserve treasury were made in the previous year. From the reserve treasury to the mufassal treasuries the remittances fell from Rs. 5½ lakhs in 1900–1901 to Rs. 4 lakhs in 1901–1902. The figures, however, do not correctly gauge the movement between the mufassal and Madras, as the remittances are usually made through the intervention of the district currency-chests. The whole-rupee remittances from the district currency-chests to Madras amounted to Rs. 1,07,69,000, but in 1900–1901 they amounted to Rs. 1,03,94,000. No remittances from Madras to the district currency-chests were made in 1901–1902, while Rs. 23,80,000 were sent in the previous year. Remittances to the value of Rs. 101 lakhs were also sent to the Bombay currency-office from the district currency-chests. **Rupees.**

The total balance in small silver fell from Rs. 10,44,000 at the close of 1900–1901 to Rs. 6,17,000 at the end of 1901–1902; most of the balance (Rs. 5,55,000) was in reserve treasuries, but the balances in currency-treasuries (Rs. 47,000) and in small-coin depots were Rs. 3,56,000 and Rs. 1,09,000 less than at the beginning of the year. The fall in the balance in currency-treasuries was due to the fact that quarter and eighth-rupees ceased to be deposited in the chest in the year under report. The only remittance in small silver received during the year was from the Hyderabad political treasury and amounted to Rs. 10,000; in 1900–01 such remittances amounted to Rs. 2,10,000 in the aggregate. The value of small silver remitted from Madras during the year amounted to Rs. 4,41,000; the value of remittances to Coorg was Rs. 91,000 and of those to Calcutta Rs. 3,50,000. The large remittance to Calcutta accounts chiefly for the fall in the balance in small silver on the 31st March 1902. In 1900–1901 remittances were made only to Coorg and amounted in the aggregate to about a lakh and a quarter. The receipts of small silver into the treasuries of this Presidency exceeded the issues by Rs. 1,55,000 in 1900–1901, but the excess was only Rs. 4,000 in 1901–1902. **Small silver coins.**

The value of copper coins which remained in the treasuries and depots was Rs. 3,53,000 at the beginning of the year and Rs. 2,94,000 at the close of the year; the amount in revenue treasuries (Rs. 2,15,000) was almost the same at the end of the year as at the beginning, but the amount in small-coin depots fell by Rs. 70,000 to Rs. 62,000 and the nominal value of uncurrent copper coins rose by Rs. 10,000 to Rs. 17,000. The only remittance of copper coin received from other provinces consisted of pie-pieces to the value of Rs. 40,000 from Calcutta; in the previous year the amount so received was Rs. 25,000. During the year under report Rs. 17,000 worth of half and quarter-annas and pie-pieces were sent to Coorg, while in the previous year the value of such remittances to Coorg was Rs. 15,000. This remittance to Coorg was the only remittance made from this Presidency in the year. The local circulation of copper rose by Rs. 82,000 while in the previous year it rose by Rs. 1,25,000. **Copper coins.**

(*b*) IMPERIAL REVENUE AND FINANCE.

General.

7. As was shown in paragraph 1, the total receipts on account of Imperial revenue fell from Rs. 8,28,70,037 in 1900–1901 to Rs. 8,07,57,198 in 1901–1902; but the expenditure also fell from Rs. 69,42,925 to Rs. 67,65,110. The incidence of taxation per head of population rose from Rs. 2–11–0 in 1900–1901 to Rs. 2–11–10. Under every major head the receipts realized during the year under report exceeded those of the previous year.

Loans.

8. The balances outstanding on the 1st April 1901 on account of loans to the Madras Municipality and the Madras Harbour Trust Board were Rs. 14,30,000 and Rs. 45,56,052. During the year under report the Harbour Trust Board paid as usual one lakh of rupees towards the loan, so that the balance on the 31st March 1902 was reduced to Rs. 44,56,052. As regards the Madras Municipality a sinking fund has been constituted, which on the 31st March 1902 held Government securities to the value of Rs. 9,39,900.

Land Revenue.

Receipts.

9. The receipts from 'land-revenue' in 1900–1901 were Rs. 5,56,73,226, but in 1901–1902 they were Rs. 5,59,56,161; the increase in this revenue was therefore Rs. 2,82,935. The ordinary land-revenue rose from Rs. 5,54,56,468 to Rs. 5,57,89,180, the increase being Rs. 3,32,712; but the sale proceeds of waste lands, etc., and receipts for the improvement of Government estates fell by Rs. 32,019 to Rs. 84,025 and the revenue realized by the sale of fisheries and other receipts classified as 'Miscellaneous revenue' declined by Rs. 17,758 to Rs. 82,956. The districts of North Arcot, South Arcot, Chingleput, Nellore and Malabar contributed an increase of Rs. 9¼ lakhs in ordinary revenue. In South Arcot, Chingleput and Nellore the increase is accounted for by the favourable character of the season, while in North Arcot it was due to the realization during the year of large arrears which were outstanding at the close of 1900–1901 owing to the unfavourable character of the season in that year. The increase in Malabar was the result of the introduction of the new rates of assessment during the year under report. These increases were for the most part counterbalanced by decreases in the districts of Kurnool, Bellary, Tanjore, Trichinopoly and Anantapur. The decrease in Bellary and Anantapur is ascribed to the unfavourable character of the season, while that in the remaining districts was due to the fact that the amount of arrears at the commencement of the year under report was smaller than that at the commencement of the previous year. The incidence of taxation per head of population rose by two pies to Rs. 1-7-5. The assessment was lowest in Vizagapatam (As. 8–11) and highest in Kistna (Rs. 3-0-8).

Expenditure.

10. The charges debited to land-revenue amounted in the aggregate to Rs. 52,86,610 and were Rs. 16,530 more than in the previous year. The charges of district administration fell from Rs. 42,03,578 in 1900–1901 to Rs. 41,90,504 mainly on account of the fall in the fees for searches in registry-offices in connection with loans owing to favourable season and partly to the transfer from this head to 'Survey and Settlement' of the charges for the establishment employed for the registration of janmam titles in Malabar district. This latter circumstance accounts in part for the increase of Rs. 8,808 under 'Survey and Settlement', to which charges amounting to Rs. 7,04,356 were debited; excess expenditure on account of surveys of estates is also another item of the increase. The increase under 'Land Records and Agriculture' from Rs. 3,63,325 to Rs. 3,85,325 was due chiefly to the transfer of the expenditure on the maintenance of land-records from 'Survey and Settlement' to this minor head.

Canal Revenue.

Canal revenue.

11. The demand on account of navigable canals fell from Rs. 2,12,409 in 1900–1901 to Rs. 2,03,502 and the amount collected from Rs. 2,10,439 to Rs. 2,00,449. The receipts during 1901–1902 were less than in the previous year in the case of every canal. The decrease in the receipts on the Gódávari and Kistna canals from Rs. 94,129 and Rs. 42,602 to Rs. 89,808 and Rs. 39,188 respectively is said to be due to competition with the railway, while the fall in the receipts on the Dumagudem canal from Rs. 451 to Rs. 375 is ascribed to the stoppage of traffic for the greater portion of the year owing to the breach in the anicut which occurred in 1900. As regards the Buckingham canal, it is explained that the decrease in collections from Rs. 71,179 to Rs. 69,121 was chiefly due to the recovery in 1900–1901 of arrears due in the previous year. The diminution in the receipts in the Kurnool-Cuddapah canal from Rs. 1,165 to Rs. 1,042 is attributed to the interruption of traffic caused by a breach in the Tangadancha tank.

IMPERIAL REVENUE OTHER THAN THE LAND.

Customs.

Sea-customs.

12. The revenue under this head is sub-divided into sea-customs and land-customs. The receipts under 'Sea-customs' exclusive of 'Import-duty on Salt,' which is credited to salt, amounted to Rs. 45,42,452. The increase of Rs. 8,67,644 over the receipts in the previous year was the net result of an increase of Rs. 2,84,476 in 'Export-duty,' Rs. 5,56,692 in 'Import-duty,' Rs. 12,312 in 'Excise-duty' on cotton manufactures and Rs. 14,164 in 'Miscellaneous collections.' The increase in

'Export-duty' is attributable to a rise in exportations of rice to Ceylon and Mauritius owing to good harvests in some districts. The increase under 'Import-duty' occurred chiefly in petroleum, sugar and cotton manufactures.

13. The receipts on account of land-customs rose from Rs. 76,708 in 1900–1901 to Rs. 1,45,712 in 1901–1902, the increase being due to the same causes as those assigned for the increase in the export duty collected as sea-customs. The incidence of taxation per head of the population on account of customs rose from As. 1–7 to As. 1–10. Owing to the amalgamation of the Customs with the Salt and Abkári department, charges on account of land-customs are not shown separately from charges of out-ports on account of sea-customs. The total charges under 'Customs' amounted to Rs. 2,75,087 and were Rs. 1,535 more than in the previous year. **Land-customs.**

Opium.

14. The receipts on account of 'Opium' which in previous years represented solely the transit-duty on excise-opium rose from Rs. 3,57,959 in 1900–1901 to Rs. 4,56,750 in 1901–1902, and the rise is attributable chiefly to the inclusion in the receipts for the first time of Rs. 73,553 on account of 'Gain on sale proceeds of opium,' rendered necessary in consequence of the change of system recently introduced, by which Government have become the sole importers of opium into this Presidency. The incidence of taxation on account of opium remained four pies per head of population. The charges rose from Rs. 1,000 to Rs. 3,553 owing to the inclusion in them of Rs. 1,972 on account of loss by dryage and wastage of opium.

Salt.

15. The salt-factory at Magilankottai in the Audirampatnam circle was closed as it proved unnecessary. There were in all 21 monopoly-factories and 45 excise-factories suitable for the manufacture of salt, but only 16 Government factories and 44 excise-factories were worked. Unseasonable rains retarded the commencement of manufacturing operations in many places, but the outturn was not affected except in the Cocanada and Cuddalore sub-divisions. The total outturn in the Presidency was in fact higher than that obtained during any of the four preceding years. The total quantity of salt manufactured amounted to 9,243,079 maunds, while in the previous year only 8,772,140 maunds were manufactured. The quantity manufactured on the excise system rose from 5,552,572 maunds in 1900–1901 to 6,309,192 maunds. The total stock of salt at the end of the year, exclusive of wastage not written off within the year, advanced from 8,339,227 maunds to 8,668,091 maunds during the year, but the total quantity of salt issued during 1901–1902 (9,700,679 maunds) was 135,507 maunds less than in 1900–1901. The decrease was mainly due to a fall of 110,021 maunds in the quantity issued for export (408,804 maunds) which occurred chiefly on account of a fall in the shipments to the Straits Settlements, Penang and Mauritius owing to the low stocks in the Tinnevelly factories. The amount issued for home and inland consumption also declined by 75,629 maunds to 89,84,823 maunds, the decrease occurring chiefly in the Chicacole and Chingleput sub-divisions. The quantity issued for curing fish rose by 46,637 maunds to 248,876 maunds and the quantity sold to the French Government (57,576 maunds) was 3,506 maunds more than in 1900–1901. **Manufacture.**

16. The receipts of the year amounted to Rs. 1,91,53,623 or Rs. 5,27,434 in excess of those of the previous year. The increase occurred almost entirely in sales of salt manufactured by Government and sold for home and inland consumption and on excise-duty which rose from Rs. 64,08,996 and Rs. 1,19,30,941 in 1900–1901 to Rs. 66,13,500 and Rs. 1,22,16,477 respectively on account of a net increase in the realizations of credits owing to the large credit-sales in the second half of 1900–1901. The increase of Rs. 30,654 in the issues for fish-curing (Rs. 1,91,287) resulted from the increased operations in the fish-curing yards especially in the Calicut sub-division. The increase of Rs. 6,785 in the issues to the French Government (Rs. 12,602) was only nominal as the receipts on this account included payments made for part of the salt supplied in 1900–1901. Of the total receipts realized during the year, Rs. 20,54,079 were realized on account of salt removed on **Revenue and expenditure.**

payment of cash and Rs. 1,69,79,787 on account of salt issued on credit before and during the year. The value of salt issued on credit during the year was Rs. 1,81,03,755 of which Rs. 90,16,413 were collected within the year and Rs. 90,87,342 were outstanding at its close; the realizations on account of salt issued in the previous year amounted to Rs. 79,63,375. The incidence of taxation on account of salt rose by one pie per head of the population to As. 7–9 per head. Owing to the amalgamation of the Customs department with the Salt and Abkári department, charges on account of 'Customs' have been combined from 1st April 1900 with those on account of 'Salt and Abkári' in the first instance. After omitting the charges relating to 'Salt Purchase and Freight' and 'Excise Licensees' Works' which are items exclusively relating to 'Salt' and deducting 5 per cent. of the balance of the cost of the combined departments as due to 'Customs', the remainder is, as formerly, debited to 'Salt and Excise' in the proportion of three-fifths and two-fifths. The charges debitable to 'Salt' amounted to Rs. 20,75,220 in 1900–1901 and to Rs. 20,34,060 in 1901–1902.

Excise.

17. The receipts from 'Abkári' rose from Rs. 1,32,29,439 in 1900–1901 to Rs. 1,38,51,924 in the year under report owing chiefly to the absence of seasonal depression which had severely affected the revenue during the previous three years. The incidence of taxation per head of population rose by four pies to As. 5–8. The charges which are calculated from those of the combined department of Salt, Excise and Customs amounted to Rs. 9,94,345 and were Rs. 10,925 less than in the previous year.

Stamps.

18. The revenue derived from 'Stamps' rose from Rs. 85,65,745 in 1900–1901 to Rs. 86,89,129 in the year under report. The rise represents the normal growth of revenue under this head. The incidence of taxation on account of stamps remained As. 3–8 per head of population. The charges also rose from Rs. 3,23,111 to Rs. 3,41,285, corresponding to the rise in the receipts.

Assessed Taxes.

19. The receipts on account of income-tax amounted to Rs. 28,68,384, while they were Rs. 27,58,345 in the previous year. The incidence of taxation remained As. 1–2 per head of the population. The charges were Rs. 30,955 or only Rs. 447 more than those of the previous year. 'Assessed taxes, Public Works department,' rose from Rs. 40,732 to Rs. 41,393.

Forests.

20. The receipts of the year on account of 'Forests' which amounted to Rs. 25,43,430 were better than those of the previous year by Rs. 2,03,260. The improvement in the receipts was due to a favourable season and to the collection of a large amount of revenue left uncollected in the previous year. The charges amounted to Rs. 16,43,575 or Rs. 71,856 less than those of 1900–1901. The surplus of the year was therefore Rs. 8,99,855, while in the previous year it was only Rs. 6,24,741.

Other Taxes levied for Imperial Purposes.

Receipts. 21. The receipts on account of Imperial revenue from other sources amounted to Rs. 2,32,40,365, while in the previous year they were Rs. 2,30,87,800. The rise of Rs. 1,52,565 was the result of increases in the receipts under four heads and **Tributes.** decreases under three heads, the amount received as tributes (Rs. 45,07,902) **Railwa .** remaining stationary. The most important of these items is 'State Railways,' the receipts from which rose from Rs. 1,70,28,667 to Rs. 1,71,80,160. This large increase of Rs. 1,51,493 was made up of a rise of about Rs. 13 lakhs in the traffic receipts of the South Indian Railway and of a fall of about Rs. 11 lakhs in the receipts of the Madras Railway North-East line and of half-a-lakh in those of the Mysore State Railway. A favourable season combined with the increase in the third-class fares for ordinary trains from 1st June 1901, the removal of plague-preventive measures, the export of grain to Colombo, the local traffic in grain and the

import of grain from Burma, contributed to the large increase in the traffic receipts of the South Indian Railway. The decrease in the traffic receipts of the North-East line of the Madras Railway was, on the other hand, only nominal being due to the inclusion in the receipts of the previous year of the earnings of the Bezwada Extension Railway and of the Waltair-Barang section of the East Coast Railway for the 'nine months' ending December 1900. The total receipts on account of 'Registration' advanced from Rs. 14,47,586 in 1900–1901 to Rs. 14,50,480, of which half was credited to Imperial funds and half to Provincial funds. The decrease of Rs. 5,910 under 'Interest' was due partly to a fall in the interest on arrears of land-revenue realized during the year and partly to a decrease in the interest recovered from the Harbour Trust Board. The latter decreases with the annual repayments towards the principal. The rise of Rs. 9,530 in the receipts under 'Superannuation,' etc., is ascribed partly to an increase in the subscriptions under the Indian Civil Service Family Pension Regulations, and partly to the appointment of a Government Officer as Agent and Manager of the Madras Railway Company. The transfer of the East Coast Railway to the Madras and Bengal-Nagpur Railway Companies led to a cessation of supplies on account of that railway by the Superintendent of Stationery; hence the receipts from 'Stationery and Printing' declined from Rs. 15,491 in 1900–1901 to Rs. 1,927. The decrease of Rs. 13,306 under 'Miscellaneous' was due mainly to the smaller supplies of European stores for Provincial and Local funds and native States, &c., than in the previous year. This led to a reduction in the percentages creditable to Imperial Revenues. The increase of Rs. 21,670 under 'Irrigation and Navigation,' which occurred chiefly under the Kurnool-Cuddapah canal, was due to the greater utilization of the canal water and to sales of certain lands, while the rise of Rs. 1,206 under 'Military Works' was chiefly due to a large receipt of Rs. 1,176, being the sale-proceeds of a recreation-room in the European infantry barracks at Cannanore, dismantled under the orders of Government.

Registration.

Interest.

Superannuation, etc.

Stationery and printing.

Miscellaneous.

Irrigation and Navigation.

Military Works.

22. The expenditure from Imperial funds on items other than those already dealt with rose from Rs. 2,05,07,584 to Rs. 2,36,15,673. The increase of Rs. 31,08,089 was the result of increments in the expenditure under fifteen heads and falls under ten heads. Refunds are subject to great fluctuations and the increase, which amounted to Rs. 74,112, was due mainly to refunds under 'Land-revenue', 'Salt,' 'Excise' and 'Forests;' the excess of refunds under 'Salt' was due chiefly to the fact that the exports of duty-paid salt to Burma were larger than in the previous year. The fall of Rs. 11,406 in 'Assignments and compensation' occurred as certain Malikhana allowances in Malabar district were not drawn. The expenditure on 'Registration' rose from Rs. 8,63,952 to Rs. 8,75,524 as some new offices were opened during the year; half the cost was debited to Imperial funds. The decrease of Rs. 8,078 under 'Interest on other obligations' occurred mainly in Savings-bank deposits and was the result of the transfer of the East Coast Railway to the Madras and Bengal-Nagpur Railway Companies, which caused a large diminution in the balances of the provident-fund of that railway on which interest was payable at Madras. The increase of Rs. 20,418 under 'General Administration' is accounted for by the fact that officers drawing higher rates of salary than in the previous year were on duty in the year under report. Under 'Ecclesiastical' the saving caused by the absence of chaplains on leave out of India in 1900–1901 was greater than in the year under report, and on the other hand an expenditure of about Rs. 4,000 was transferred to the Military department during the year on account of capitation allowances to ministers for ministering to British troops; the result on the whole was an increase of Rs. 6,357. The decrease of Rs. 10,911 under 'Political' was due to the absence of charges in connection with the refugees from the Transvaal. The expenditure on 'Scientific and other minor departments' which rose from Rs. 62,954 to Rs. 1,95,635 was mainly due to the heavy charges connected with the census. Territorial and political pensions are annually decreasing owing to lapses by death and to commutations; the decrease, which amounted to Rs. 11,055, would have been greater, but for the payment of about Rs. 15,000 on account of special commutations of Carnatic stipends. The increase of Rs. 6,749 under 'Superannuations' was due chiefly to payment of arrears on account of pensions of the Military Fund. The fall from Rs. 3,98,742 to Rs. 80,670 in the expenditure on 'Stationery and Printing' occurred under 'Stationery purchased for central stores' and was due

Expenditure.

Refunds.

Assignments and compensation.

Registration.

Interest on other obligations.

General administration.

Ecclesiastical.

Political.

Scientific and other minor departments.

Territorial and political pensions.

Superannuations.

Stationery and printing.

principally to the transfer of the source of supply of certain articles of stationery from India to England. The increase of Rs. 9,693 under 'Miscellaneous' was due mainly to the larger remittances made to the Bombay Currency office in the closing months of the year. The increased number of works on the Rushikulya project and the surveys and investigations specially undertaken during the year account for the large increase from Rs. 38,525 to Rs. 1,05,918 in the expenditure on the construction of protective irrigation works. The working expenses of State Railways rose from Rs. 95,70,065 in the year 1900–1901 to Rs. 96,20,645, the expenditure on the construction of State Railways from Rs. 45,41,223 to Rs. 89,75,979 and miscellaneous expenditure on railways from Rs. 83,678 to Rs. 1,73,308; on the whole the expenditure under these three heads increased by the large sum of Rs. 45,74,966. Considering the individual railways, there was a large increase of Rs. 56,65,357 in the expenditure on the South Indian Railway from Rs. 86,97,200 to Rs. 1,43,62,557, which was due chiefly to the large outlay on the construction of the Pámban and Travancore branches and partly to the special expenditure incurred for the renewal of permanent-way and for repairs to bridges and stations, to the replacement of condemned engines, to the increased consumption of coal, and to increased expenditure on the repair of goods vehicles. The reason already assigned for the short earnings of the North-East line of the Madras Railway explains the fall in the expenditure on that line from Rs. 40,36,483 to Rs. 26,71,150. Increased expenditure on the renewal of sleepers, the substitution of heavier rails for those already in use on the Hubli-Castle Rock section and the replacement of the wheels and axles on goods-stock by stronger articles account for the increments of Rs. 48,849 and Rs. 11,184 in the expenditure on the Mysore State and the Guntakal-Mysore Frontier railways. The excess of Rs. 1,24,946 in the expenditure on the Bezwada Extension Railway was nominal, as the accounts of that railway were included in those of the North-East line of the Madras Railway in the previous year. Other variations occurred in the amounts spent on the survey of proposed railways, mentioned in Chapter IV, paragraphs 107 to 127. The increase of Rs. 28,663 in the State outlay on Guaranteed Railways occurred in the charges for supervision on account of the transfer of the East Coast Railway to the Madras Railway. The negative entry of Rs. 12,34,720 under 'Construction of Railways' represents the adjustment of the purchase-money of the Tanjore District Board Railway due by the Tanjore district board to Government. The fall from Rs. 57,171 to Rs. 162 in the expenditure on 'Subsidized Railways' occurred in connection with the Nilgiri Railway. The decline from Rs. 15,48,188 to Rs. 14,83,514 under 'Irrigation and Navigation—Major works (working expenses)'—and the decrease from Rs. 8,32,857 to Rs. 7,08,736 under 'Capital expenditure on Irrigation works—not charged against revenue'—were due to the fact that less work was executed on the Gódávari and Kaveri delta works than in the previous year. The increase of Rs. 5,005 in the expenditure on 'Military works' was due to the increase in the number of major works in progress during the year. The increase of Rs. 16,766 in the expenditure on 'Civil works—Public Works department' was the result of the extended programme of works under execution during the year.

Miscellaneous.

Protective irrigation works.

Railways.

Irrigation and navigation—major works.

Capital expenditure on irrigation works.

Military works.

Civil works, Public Works department.

(c) REVENUE AND FINANCE OTHER THAN IMPERIAL.

Provincial Revenues.

Gross receipts and expenditure.

23. The receipts and the expenditure on account of Provincial funds in the year under report exceeded those in the previous year by Rs. 50,14,688 and Rs. 6,18,483 respectively. The total improvement over the year 1900–1901 was therefore Rs. 43,96,205 and the deficit of Rs. 3,21,013 in that year was in consequence changed into a surplus of Rs. 40,75,192 in the year under report. This high closing balance was due to a special contribution of Rs. 32,14,000 in aid of Provincial revenues which was made by the Government of India in addition to the grant of ten lakhs of rupees to be spent on Public Works in 1902–1903.

Transactions shared with Imperial funds.

Land-revenue.

24. As the total land-revenue rose from Rs. 5,56,73,226 to Rs. 5,59,56,160, the Provincial share divided proportionately advanced from Rs. 1,39,18,307 to Rs. 1,39,89,040, but the actual Provincial share rose from Rs. 1,55,46,731 to Rs. 2,01,13,824. The two special grants of Rs. 32,14,000 and Rs. 10,00,000 account for a great part of the difference. The fixed assignment under the Provincial settlement

was Rs. 16,46,000 as in the year 1900–1901. In the year under report Rs. 1,85,778 were contributed from Imperial funds towards the improvement of coast-lights, Rs. 53,000 as compensation for the loss of the Provincial share of the receipts of the Máyavaram-Mutupet Railway, Rs. 45,000 towards the enlargement and improvement of St. Mark's Church, Bangalore, and Rs. 16,700 on account of income-tax collected in Civil and Military Station, Bangalore. Deductions of Rs. 12,750 on account of the transfer of the charges for freight, etc., to the head 'Salt purchase and Freight' from the head 'Salaries, Establishment and Contingencies' and of Rs. 23,000 on account of the transfer of the charges for 'Public Observatories and Rain-gauges' to the Government of India were made as in the previous year. Such explanations as may be required in connection with variations in the receipts and expenditure under 'Salt,' 'Stamps,' 'Excise,' 'Customs,' 'Assessed taxes,' 'Forests' and 'Registration' have been given in paragraphs 12 to 22.

Other taxes shared with Imperial.

25. The Provincial revenue derived from other sources, amounting to Rs. 40,19,352, was Rs. 17,230 more than in the previous year. The excess was the result of increased receipts under ten heads and diminished receipts under seven heads. The increase of Rs. 24,119 under 'Law and Justice—Courts of Law' was due to an excess under 'General Fees—Fines and Forfeitures;' the main items of receipt included this minor head—'Magisterial Fines' and 'Translation and printing fees of the High Court'—are of a fluctuating nature. The decrease of Rs. 50,396 under 'Jails' was due to a diminution in the supplies to the Military department. An improvement in the recoveries on account of the punitive police employed in Tinnevelly district and a rise in the receipts from cattle-pounds led to an increase of Rs. 24,108 in the receipts under 'Police.' The rise of Rs. 24,727 under 'Education' is attributable partly to improved attendance in colleges, especially in the Law College, and partly to increased sales in the School of Arts. The growth of the aluminium industry, the increase in the demand for quinine and the very active operations in connection with emigration explain the increase of Rs. 71,139 under 'Scientific and other minor departments.' The rise of Rs. 12,352 in the receipts under 'Superannuation' occurred mainly in the contributions of officers lent for foreign service. The decline of Rs. 9,066 in the receipts under 'Miscellaneous' occurred mainly in unclaimed deposits and in the recoveries of famine expenditure. As the receipts from tolls on the Pottanghi ghát-road in Vizagapatam district were transferred to the credit of the Public Works department, the receipts under 'Civil works by Public Works officers' rose by Rs. 7,765 and those under 'Civil works by Civil officers' fell by Rs. 8,480. The decrease of Rs. 79,898 under 'Contributions from Local to Provincial funds' was due mainly to the reduction in the contribution from the Tanjore district board on account of the profits of the Tanjore District Board Railway, as the purchase-money of that railway was adjusted during the year by a loan from Government.

Other receipts.

Law and Justice—Courts of Law.

Jails.

Police.

Education.

Scientific and other minor departments.

Superannuation.

Miscellaneous.

Civil works.

Contributions.

26. The charges under heads other than 'Land-revenue,' 'Registration' and other heads already dealt with in paragraphs 23 to 25 amounted to Rs. 2,60,44,198 and were Rs. 6,23,764 more than in the year 1900–1901. This increase was the result of enhanced expenditure under seventeen heads and of diminished expenditure under five heads. The increase of Rs. 17,424 in refunds occurred under 'Land-revenue,' 'Excise' and 'Forests.' The expenditure on 'General Administration' rose by Rs. 20,068 owing to the payment of allowances to the Chief Secretary on privilege leave and to special expenditure incurred on account of His Excellency the Governor's camp equipage in connection with the Delhi Darbar. The decrease of Rs. 19,207 under 'Law and Justice—Courts of Law' occurred mainly in the charges on account of translation and printing executed by the High Court on behalf of suitors, in fees to pleaders in criminal cases and under 'Civil and Sessions courts.' The increase of Rs. 21,718 under 'Jails' was due to enhanced expenditure on account of jail manufactures and dietary charges; the excess in dietary charges reflects the growth of the number of prisoners. The rise of Rs. 96,613 under 'Police' took place chiefly in the charges for police-force including office establishments and supplies and services; refunds on account of excess collections of the punitive police cess in Tinnevelly district also added to the expenditure. Increased expenditure in grants-in-aid and payments by results mainly accounts for the rise of Rs. 58,161 under 'Education.' The decrease of Rs. 41,625 under 'Medical' was due chiefly to a fall in charges connected with the plague. The rise of Rs. 18,728 under 'Scientific and other minor departments'

Other charges.

Refunds and drawbacks.

General administration.

Law and Justice—Courts of Law.

Jails.

Police.

Education.

Medical.

Scientific and other minor departments.

was due mainly to the increased expenditure incurred in connection with the manufacture of aluminium-ware at the School of Arts. The charges under 'Superannuation' advanced by Rs. 20,079 owing chiefly to the growth of pensions. The decrease of Rs. 65,358 under 'Stationery and Printing' was due mainly to the fact that the annual indent of the Superintendent, Government Press, was not complied with within the year and to the non-issue of a large quantity of printing double foolscap paper owing to its late arrival from England. The expenditure on 'Famine Relief—Public Works Officers' fell from Rs. 1,05,695 to Rs. 36,439, as the season was more favourable than in the previous year. Liberal grants sanctioned for expenditure on agricultural works in Gódávari, Kistna and Trichinopoly districts explain the increase of Rs. 1,00,141 under 'Irrigation and Navigation—Public Works Officers.' The transfer of the expenditure on works costing more than Rs. 1,000 from the budget grant of the Civil department to that of the Public Works department led to a decrease of Rs. 35,711 in the charges under 'Irrigation and Navigation—Civil Officers.' The fact that the programme of works during the year was larger than in the previous year accounts for the increase of Rs. 3,19,307 under 'Civil Works—Public Works Officers.' The excess expenditure of Rs. 1,16,570 under 'Civil Works—Civil Officers' was caused by the grants of Rs. 1,50,000 and Rs. 40,000 to the Madras and Ootacamund municipalities for expenditure in connection with plague and water works respectively. Increased contributions from Provincial funds on account of education and public works explain the rise of Rs. 36,955 under 'Contributions from Provincial to Local funds.'

Superannuation.

Stationery and printing.

Famine relief.

Irrigation and navigation.

Civil works.

Contributions.

Loans.

27. The loans which amounted to Rs. 12,78,333 at the beginning of the year, were increased by Rs. 1,67,490 by the grant of new loans during the year and reduced by repayments amounting to Rs. 67,565 in the aggregate. The loans were in consequence increased by Rs. 99,925 and amounted to Rs. 13,78,258 at the close of the year. This sum included Rs. 13,27,268 lent to mufassal municipalities, Rs. 40,000 lent to the Bellary district board and Rs. 10,990 advanced to the Nawab of Banganapalle. The total sum of Rs. 1,67,490 advanced during the year included a loan of Rs. 10,990 granted to the Nawab of Banganapalle for the survey of his State, loans of Rs. 25,000 and Rs. 8,000 to the Bellary and Vániyambádi municipalities, respectively, for charges in connection with the plague, and loans of Rs. 50,000, Rs. 31,500, Rs. 26,000 and Rs. 16,000 to the Tuticorin, Ootacamund, Trichinopoly and Adóni municipalities for expenditure on water-supply. The loan of Rs. 56,000 originally sanctioned to the Nawab of Banganapalle for the survey of his State was cancelled in November 1901, and the amount of expenditure actually incurred in each year in connection with the survey is alone to be taken into account.

Advances.

Local Funds.

Local Boards.

28. The receipts relating to Local funds levied under the Madras Local Boards Act (V of 1884), exclusive of Debt transactions, amounted to Rs. 88,35,112 and were Rs. 4,61,081 more than in the previous year. The receipts under 'Land-revenue' rose by Rs. 34,502; they consisted almost entirely of receipts from the sale of fisheries, which owing to the favourable season and keen competition among the bidders largely exceeded those of the previous year. The increase of Rs. 1,77,930 under 'Provincial Rates,' was due partly to the favourable season which led to the prompt collection of the arrears as well as the current demand and partly to the increased collections of house-tax. The increase of Rs. 10,392 under 'Interest' was due entirely to the increase in the funded capital of the Railway Guarantee Fund of the Tanjore district board, while the rise of Rs. 4,563 under 'Law and Justice—Courts of Law' was the outcome of an increased recovery of fines under Police and other Acts in the districts of Coimbatore, Gódávari and Madura. Improved attendance in schools was the principal cause of the increase of Rs. 15,994 under 'Education.' Under 'Medical' the increase of Rs. 3,848 was found mainly in the contributions from private individuals and in the income from endowments. Under 'Miscellaneous' the increase of Rs. 74,415 was due to fluctuations in the collection of arrears of rents chiefly on account of choultries in Tanjore district. The improvement of Rs. 54,785 in the receipts under 'State Railways' is attributed to the increase of traffic in the Tanjore District Board Railway. The increase of Rs. 48,024 under 'Civil Works by Civil Officers' was due mainly to a rise in the

Receipts.

receipts on account of the sale of avenue clippings which are subject to fluctuation. Increased contributions from Provincial funds on account of education and public works explain the increase of Rs. 36,954 under 'Contributions from Provincial to Local Funds.'

Expenditure.

29. The total expenditure amounted to Rs. 83,89,100, while it was Rs. 80,06,050 in the previous year; there was therefore a net rise of Rs. 3,83,050 in expenditure which was due to increased expenditure amounting to Rs. 5,44,593 under nine heads and decreased expenditure amounting to Rs. 1,61,543 under five heads. The increase of Rs. 2,182 under 'Interest on other obligations' represents the interest paid by the district board, Bellary, on the loan taken by that board in connection with plague-preventive measures. The rise of Rs. 13,856 under 'General Administration' was due mainly to increased expenditure under the head 'Miscellaneous' chiefly in Tinnevelly district, and the rise of Rs. 17,692 under 'Education' is attributable chiefly to excess expenditure on account of high schools, primary schools and results-grants. The large increase of Rs. 1,11,782 under 'Medical' was mainly in charges on account of plague; there was also increased expenditure on account of hospitals and dispensaries. The payment of a gratuity of Rs. 5,000 to a District Board Engineer accounts mainly for the increase of Rs. 6,130 under 'Superannuation,' whilst the decrease of Rs. 26,452 under 'Stationery and Printing' was due to diminished expenditure in connection with the printing of forms of accounts at the Central press. Increased expenditure under contingencies on account of choultries in the districts of Tanjore and Tinnevelly, chiefly accounts for the increase of Rs. 6,991 under 'Miscellaneous.' No famine relief works appear to have been executed by the Public Works department on account of district boards in the year under report; hence the absence of charges under 'Famine relief' and the consequent decrease of Rs. 48,638 in expenditure. The large increase of Rs. 1,17,175, under 'State Railways' was due partly to the working expenses of the Tanjore District Board Railway in the year under report having exceeded those of the previous year in consequence of increase of traffic and partly to the adjustment of interest on the purchase-money of the above railway since ordered to be treated as a loan to the Tanjore district board by the Government of India. No special reasons can be assigned for the increase of Rs. 29,670 under 'Civil Works by Civil Officers.' The figure under 'Construction of State Railways' (Rs. 2,39,115) represents the expenditure on the construction of the extension to Arantangi of the Tanjore District Board Railway. According to the procedure laid down by the Government of India the total capital expenditure commencing with the outlay for 1900–1901 both on the main line and the extensions of the Tanjore District Board Railway should be charged to the Debt head 'Capital account of local boards' until the capital raised by debentures is exhausted, and any excess over this should be charged to the head 'Construction of railways.' As no loan from the public was floated in the year under report, the expenditure incurred in excess of the balance of the loan floated in 1900–1901 was charged to 'Construction of Railways.' The large decrease of Rs. 82,381 under 'Contributions from local to provincial funds' was due mainly to the adjustment already mentioned of the purchase-money of the Tanjore District Board Railway by a loan from Government, the contribution from that district on account of the profits of the railway having been consequently reduced, and partly to short recoveries on account of Public Works. The funded capital of the district boards which stood at Rs. 23,13,897 on the 1st April 1901 was reduced to Rs. 16,19,062 on the 31st March 1902, the reduction being due chiefly to the sale by the Tanjore district board of the promissory notes relating to the Railway Guarantee fund to the nominal value of Rs. 7 lakhs.

Village Service funds.

30. The receipts appertaining to 'Village service funds' comprise (1) contributions from general revenues, (2) contributions from ryots, and (3) miscellaneous sundry items. The contributions from ryots are levied under the provisions of Madras Village Cess Act (IV of 1893) which is in force throughout the Presidency except in certain taluks of Malabar district, and the contributions from the general revenues should equal the village-cess collected under the above Act. The total receipts of the year under report amounted to Rs. 54,55,599 and in the previous year the receipts were Rs. 52,26,574. The increase of Rs. 2,29,025 was in part due to the fact that the Government contribution payable for 1900–1901 was reduced by a sum of Rs. 1,16,000 in adjustment of an excess contribution made by Government in the previous year. It was also due to the fact that the village-cess

was levied throughout the year under report at the uniform rate of 9 pies in the rupee, while the lower rate of 8 pies in the rupee was in force in the previous year till the 30th June. The total charges rose from Rs. 50,54,016 in the previous year to Rs. 51,60,546. The increase of Rs. 1,06,530 was due (1) to the payment of large arrears of salary to village officers, (2) to increased expenditure on the construction and repair of chavadis, (3) to the refund to lanka renters in Gódávari district of the village-cess erroneously collected from them, and (4) to the introduction of the scheme for the revision of village-establishments in Trichinopoly district. The balance at the credit of these funds which stood at Rs. 2,31,436 on the 1st April 1901 was raised to Rs. 5,26,489 on the 31st March 1902.

Irrigation-cess funds.

31. Irrigation-cess funds exist only in the districts of Chingleput, Trichinopoly, Madura, Coimbatore and Salem. In Tanjore, however, voluntary contributions continue to be made by certain ryots towards the cost of the establishment for regulating the supply of water from the Cauvery. The total receipts fell from Rs. 39,363 to Rs, 35,603. The decrease occurred mainly in the districts of Chingleput and Trichinopoly. The decrease in Chingleput was due to the remission of the cess, while that in Trichinopoly was due to the abolition of the cess in the reclassified tracts of the district. The charges, however, rose from Rs. 37,270 to Rs. 43,127 The increase occurred mainly in the districts of Trichinopoly and Salem. The large increase in Trichinopoly was due to refund of cess while that in Salem represents the expenditure incurred in the construction of certain masonry works. The balance at the credit of these funds which stood at Rs. 64,145 on the 1st April 1901 was reduced to Rs. 56,621 on the 31st March 1902.

Bhadrachalam road fund.

32. The receipts and charges on account of the Bhadrachalam road fund amounted to Rs. 6,405 and Rs. 5,100, while they were Rs. 6,939 and Rs. 6,540 respectively in the previous year.

Excluded Local funds.

33. The funds comprised in the category of Excluded Local funds are (1) Port and Marine funds, (2) Cantonment funds and (3) The University Fee fund. The transactions of Cantonment funds are accounted for in accordance with special rules, whilst those of the two remaining funds follow generally the procedure adopted in the case of Incorporated Local funds.

Port and Marine funds.

The Port and Marine funds, which represent the largest portion of the Excluded Local funds in this Presidency, comprise the receipts and charges under the Indian Ports Act (X of 1889), the Landing and Shipping Dues Act (III of 1885) and Pilotage funds and Pier dues Acts (V of 1863 and VII of 1871). The receipts and charges falling under Act X of 1889 which are again sub-divided into those of (1) Madras, (2) Eastern group and (3) Western group amounted in the aggregate to Rs. 8,52,685 and Rs. 5,48,229 while in the previous year they were Rs. 5,76,532 and Rs. 8,39,658 respectively. The net result of the transactions of the year under report was thus a surplus of Rs. 3,04,456, and the deficit balance of Rs. 1,42,355 on the 1st April 1901 was raised to a credit balance of Rs. 1,62,101 on the 31st March 1902. The receipts and charges of the Landing and Shipping Dues fund rose from Rs. 87,548 and Rs. 1,07,005 respectively in the previous year to Rs. 94,488 and Rs. 1,10,289. The charges of the year under report having exceeded the receipts by Rs. 15,801, the balance which stood at the credit of this fund on the 1st April 1901, viz., Rs. 1,45,972, was reduced on the 31st March 1902 to Rs. 1,30,171. The invested balance for the Masulipatam Port stood unaltered at Rs. 5,000. Any surplus or deficit of Pilotage funds is adjusted against the Port funds of the group concerned, so as to leave no balance at the credit of these funds. The receipts and charges of the year were each Rs. 55,847. A similar adjustment is made in respect of Pier dues. The receipts and charges of the year were each Rs. 49,527. The gross receipts on account of Port and Marine funds rose from Rs. 7,52,885 in 1900–1901 to Rs. 10,52,547, while the expenditure fell from Rs. 10,35,467 to Rs. 7,63,892, the balance therefore increased from Rs. 3,618 on 1st April 1901 to Rs. 2,92,273 on 31st March 1902.

Cantonment funds.

The receipts and charges of the Cantonment funds during the year 1901–1902 were Rs. 34,642 and Rs. 35,603, respectively; in the previous year they were Rs. 36,583 and Rs. 35,799 respectively. The balance at the credit of the funds fell from Rs. 3,301 at the beginning of the year to Rs. 2,340 at its close.

University fee fund.

The receipts and charges of the University Fee fund were Rs. 2,25,754 and Rs. 1,92,244 respectively, while they were Rs. 2,19,991 and Rs. 2,40,199 in the year 1900–1901; the balance on the 1st April 1901, which stood at Rs. 37,260, was

raised to Rs. 70,770 on the 31st March 1902. The invested balance in Government securities, which was Rs. 3,83,700 on the 31st March 1901, remained unaltered during the year under report.

Road Cesses.

34. There is nothing to be recorded under this head, as no road cesses are levied in this Presidency, the roads being generally maintained by local boards from the funds at their disposal.

Education Cesses.

35. No education cesses are levied in this Presidency, the cost of education being defrayed from Provincial funds and from the funds at the disposal of local boards.

Municipal Revenues.

Mufassal Municipalities.

36. Excluding the opening balance of Rs. 9,54,682, the total receipts of mufassal municipalities of the year amounted to Rs. 33,10,052—Rs. 2,43,518 more than in 1900-1901. The increase occurred chiefly under taxation, loans and advances, but it was partly counterbalanced by a decline under grants from Government. In paragraphs 37 to 45 below, the revenue and finance of mufassal municipalities only are considered.

Receipts from Taxation.

Tax on buildings and lands.

37. The average incidence of municipal taxation per head of the population rose from As. 15-1 including tolls and As. 11-9 excluding them in 1900-1901 to As. 15-6 and As. 12-2 respectively. In the year under report the rates of the taxes on buildings and lands were raised from $7\frac{1}{2}$ to 8 per cent. of their annual value in Vizianagram, while the rate of the tax on buildings was increased from $6\frac{1}{4}$ to 8 per cent. in Tuticorin and from $7\frac{1}{2}$ to $8\frac{1}{2}$ per cent. in Srírangam. The tax on lands was for the first time levied in the municipality of Nandyal. In Ootacamund and Anakápalle the land-tax was assessed at $8\frac{1}{2}$ and $3\frac{1}{8}$ per cent. respectively of the annual value of the lands taxed, and not as in the previous year with reference to area, while in Tirupati a tax at $7\frac{1}{2}$ per cent. of the annual value was substituted for acreage rates in the case of agricultural lands. The net current demand of the taxes on buildings and lands was Rs. 8,94,428, or Rs. 17,663 more than in the previous year. An increase occurred in 43 municipalities, but it was marked only in Tuticorin where the rate of the tax was enhanced and in Nandyal where the land-tax was for the first time levied during the year. In Tiruvannámalai and Bimlipatam, the demand was the same as in the previous year, but in the remaining fifteen towns there was a decrease, which, however, was small, except in Ootacamund where the demand fell considerably owing to the adverse decision of the High Court in a case which was taken on appeal there. There was a slight improvement in the collections, the percentage of current collections advancing from 91·4 to 91·8, and that of arrears from 53·8 to 54·2. A sum of Rs. 22,946 was remitted or written off the accounts as irrecoverable by municipal councils. The balance at the end of the year amounted to Rs. 98,785, or Rs. 6,491 less than at the beginning, but it was still very heavy in Bellary, Dindigul, Madura and Tanjore. The average incidence of the tax on buildings rose from Rs. 2-10-5 per house taxed in the previous year to Rs. 2-11-1. As usual, the incidence was highest in the hill stations of Coonoor (Rs. 22-8-7), Ootacamund (Rs. 12-2-3), and Kodaikánal (Rs. 11-1-5), and lowest in Tiruvannámalai (Rs. 1-1-2). In Kodaikánal the land-tax was not levied during the year, while in Ootacamund its collection was held in abeyance owing to the adverse decision of the High Court in the case above referred to. The extent of land assessed in Calicut, Mangalore and Vizagapatam is not known. In the remaining towns 65,250 acres of land were assessed at Rs. 87,660, the average tax per acre falling from Rs. 1-6-3 in the previous year to Rs. 1-5-6. Excluding Cochin, where the incidence (Rs. 94-5-5) was, as usual, abnormally high, owing to special local circumstances, the average assessment was again highest in Rajahmundry (Rs. 7-11-7) and lowest in Bellary (As. 3-4).

Water and drainage tax.

38. In Conjeeveram the rate at which the water and drainage tax was levied was raised from 4 to 5 per cent. of the annual value and in Kurnool from 5 to 6 per cent. The total net demand of the tax rose from Rs. 1,82,855 in 1900-1901 to Rs. 1,93,441 (Rs. 1,67,654 current and Rs. 25,787 arrears). Of the current

demand 91·0 per cent. was collected, but the percentage of arrears realized was only 48·2. Excluding Rs. 7,055 remitted and written off the accounts as irrecoverable, there remained a balance of Rs. 21,386 at the close of the year, the outstandings being again heavy in Tanjore (Rs. 6,352), Ootacamund (Rs. 3,627) and Madura (Rs. 3,261).

Tax on arts.

39. The tax on arts was newly introduced in the towns of Karúr and Palni and was levied in all the municipalities on all classes of the schedule. The total net current demand of the tax (Rs. 2,05,698) varied but little from that of the previous year. The remissions granted by the municipal councils on appeal fell from 4 per cent. of the demand in the previous year to 3·4 per cent., but they were heavy in Palni (18·8 per cent.) and Cannanore (13·6 per cent.). The percentage of current collections advanced from 90·1 per cent. in 1900–1901 to 91·4 per cent. and was good, but the realizations of arrears which rose from 40·5 to 49·7 per cent. were still indifferent. The total amount remitted and written off as irrecoverable was Rs. 7,087 against Rs. 9,924 in the previous year. The total number of persons assessed to the tax on arts was 53,527 or 2·8 per cent. of the population, while 52,498 or 2·7 per cent. were assessed in 1900–1901, and the average incidence fell from Rs. 3–14–9 to Rs. 3–13–6. The incidence was high in Cochin (Rs. 8–13–9), Bimlipatam (Rs. 8–5–10), and Ootacamund (Rs. 6–5–0).

Tax on servants.

40. The tax on servants was levied in the three hill stations of Kodaikánal, Coonoor and Ootacamund at the same rates as in the previous year and it yielded a revenue of Rs. 3,792 or Rs. 237 less than in 1900–1901. The decrease occurred in the first two towns, and was due partly to the fall in the number of visitors and partly to the fact that some of them paid the profession tax instead of the servants' tax.

Tolls.

41. As in the previous year, no tolls were levied in Cochin, Coonoor and Ootacamund. Of the remaining 57 municipalities, 55 had toll-gates of their own, while two, namely, Srírangam and Trichinopoly, continued to receive a share of the receipts from the gates maintained by the district board. In Chicacole, Cocanada, Ongole, Tirupati and Máyavaram, tolls were collected departmentally, while in the other towns they were leased out to contractors. The total number of municipal toll-gates fell from 399 in 1900–1901 to 392, but the gross collections advanced from Rs. 5,15,761 to Rs. 5,29,720, the increase being due to the enhancement of the rate of tolls from one-half to three-fourths of the maximum in Palamcottah. Of the total sum realized, Rs. 1,52,765 were paid to the district boards, while the contributions received from them amounted to Rs. 16,710. The total amount credited to municipal funds was thus Rs. 3,93,665 or Rs. 4,279 less than in the previous year.

Miscellaneous receipts.

42. The total income derived from sources other than taxation rose from Rs. 12,59,380 in the previous year to Rs. 14,63,834—an increase which occurred mainly under recoveries for services rendered to private individuals, loans and advances recovered being partly counterbalanced by a decrease under sale-proceeds of lands, etc., and contribution from Government and other sources. A revenue of Rs. 41,824 was realized from conservancy receipts, while only Rs. 36,748 were realized in the previous year. It was largest in Trichinopoly (Rs. 6,485), Madura (Rs. 5,515), Cuddalore (Rs. 4,545), Tanjore (Rs. 4,145) and Conjeeveram (Rs. 2,547), while nothing or almost nothing was derived in Berhampur, Parlákimedi, Kodaikánal, Cochin, Tellicherry, Tirupati and Negapatam. Of the total income of Rs. 2,16,866 derived from markets and slaughter-houses, Rs. 1,59,105 were from markets and Rs. 56,301 from slaughter-houses, the remaining Rs. 1,460 being the receipts from the joint lease of the market and the slaughter-house in Palamcottah. In Chingleput, Cannanore, Srívilliputtúr, Tuticorin, Bimlipatam and Vizianagram, there were no public markets; but the needs of most of these towns were supplied by suitable private markets. All the other municipalities had markets of their own, which numbered in the aggregate 121, or three more than in the previous year. Excluding the charges amounting to Rs. 6,855 incurred on these institutions on account of public works and establishments, the net receipts in all the municipalities except Palamcottah rose from Rs. 1,48,586 in 1900–1901 to Rs. 1,52,250. A sum of Rs. 50,105 was realized from license-fees, or Rs. 5,023 more than in the previous year.

Conservancy receipts.

Fees and revenue from markets and slaughter-houses.

License-fees.

43. The income from fines under municipal and other Acts fell from Rs. 38,779 in 1900–1901 to Rs. 33,533. The grants received from Government amounted to Rs. 72,106 or Rs. 61,987 less than in the previous year. A grant of Rs. 5,000 was made to the municipal council of Ootacamund for the maintenance of their roads, and Rs. 2,000 to the municipal council of Cuddapah for improving their financial position. The contributions received from local funds and other sources amounted to Rs. 96,723 and Rs. 27,137 respectively, while they were Rs. 1,01,927 and Rs. 47,488 in the previous year. The recoveries for services rendered to private individuals rose from Rs. 1,27,016 in the previous year to Rs. 1,39,649. Of this sum, Rs. 1,20,356 were recovered as fees for the private scavenging service and the remainder for other services. The private scavenging system was in force in all the municipalities, and there was a further increase from 64,062 to 67,245 in the number of houses served by the municipal agency. As more than one-third of the total number of houses having private latrines are still outside this system, there is ample scope for its further extension, and the special attention of the municipal councils has been drawn in the individual reviews to this matter. Of the total amount of fees (Rs. 1,30,571) due on this account, Rs. 1,20,356 or 92·2 per cent. were realized within the year. The total charges which amounted to Rs. 1,12,691, were, however, more than fully met by the receipts and the system was self-supporting in 44 municipalities; in the remaining sixteen towns the service was worked at a loss to the councils. Loans amounting to Rs. 25,000 and Rs. 8,000, respectively, were taken from Government by the municipal councils of Bellary and Vániyambádi for expenditure on plague-preventive measures. The municipal councils of Adóni, Trichinopoly and Tuticorin borrowed Rs. 16,000, Rs. 26,000 and Rs. 50,000, respectively, from Government for expenditure on their water-works, while the council of Ootacamund obtained a loan of Rs. 71,500 from Government and another of Rs. 13,500 in the open market for the construction of the Tiger Hill reservoir. Of the loan of Rs. 71,500 paid to the Ootacamund council, however, Rs. 40,000 were, after the close of the year, converted into a grant.

Magisterial fines.

Grants and contributions.

Recoveries for services rendered to private individuals.

Loans.

44. The total expenditure was Rs. 36,41,428 or Rs. 5,21,605 more than in 1900–1901, the increase appearing chiefly under public works, sanitation and advances and being partly counterbalanced by a decrease under repayment of debt. Examining the detail heads it will be seen that Rs. 11,32,323 were spent on public works, Rs. 3,56,490 on education, Rs. 11,25,871 on medical relief, vaccination, registration of vital statistics and sanitation, Rs. 2,65,385 on lighting and miscellaneous purposes, Rs. 2,36,707 on general establishment and Rs. 5,24,652 on repayment of debt, advances, etc. The objects on which municipal councils expended their funds appear in chapter III, paragraphs 43 to 57, Municipal Administration.

Expenditure.

45. Loans aggregating Rs. 60,795 were repaid, Rs. 11,275 were transferred to sinking fund and Rs. 80,379 were paid as interest on the municipal debt during the year under report, the corresponding figures for the previous year being Rs. 73,160, Rs. 10,111 and Rs. 71,888. Advances amounted to Rs. 3,45,456 while they were only Rs. 27,676 in the previous year, the increase being due to the advances made to the Public Works department by the municipal councils of Cocanada, Tuticorin and Trichinopoly for the execution of their water-supply works. The closing balances of all the municipalities taken together amounted to Rs. 6,23,973 or 22·1 per cent. of the current receipts. The percentage was large in Berhampur (72·1), Tuticorin (63·7), and Mangalore (53·2) owing chiefly to the reservation of large sums for expenditure on water-supply or drainage schemes. In 13 municipalities the balance was below the limit of 10 per cent. prescribed by Government, while in Kurnool and Vániyambádi, the year closed with a deficit of Rs. 1,077 and Rs. 466, respectively, which in the former town was due mainly to the large outlay in connection with water-supply in previous years and in the latter to the heavy expenditure incurred on plague-preventive measures.

Debt, Closing Balance, etc.

Indebtedness.

Advances.

Closing balance.

46. The opening balance at the disposal of the Municipality of Madras was Rs. 3,66,190 on the 1st April 1900, but on the 1st April 1901 it was Rs. 3,63,133. The receipts during the year 1901–1902 were Rs. 18,13,709, while in the previous year they amounted to Rs. 25,91,800; the difference is more than accounted for by the fact that the loans in the year under report amounted to only Rs. 29,000, while in the year 1900–1901, Rs. 10,30,000 were borrowed by the Municipality. The

City of Madras.

[*Administration Report of the Madras Municipality for 1901–1902.*]

Receipts.

aggregate funds at the disposal of the Municipality were therefore Rs. 21,76,842—Rs. 7,81,148 less than in the previous year. The revenue from municipal rates and taxes rose by Rs. 21,225 to Rs. 10,54,464 and that from municipal property and other source, fell by Rs. 12,109 to Rs. 3,26,954. Owing to the thorough revision of assessments in the sixth municipal division and to the ordinary revision in the other divisions, the net current demands under the tax on buildings and lands and under the water-tax advanced and the amounts collected under these two heads rose by Rs. 15,255 and Rs. 5,861 respectively. The decline of Rs. 3,856 in the income from the tax on vehicles and animals is ascribed to the extension of the tramways, to the opening of the Madras Railway to the Beach and to the introduction of rickshaws. The grant of a refund to the contractor for the sewage-farms on account of lands not prepared for cultivation was the chief reason for the fall of Rs. 8,788 under 'Rent of lands, etc.' As the General Market was closed in August 1901, the receipts from market and slaughter-houses fell by Rs. 4,776. The grants and contributions from Government rose from Rs. 35,503 to Rs. 1,89,192, as a grant of Rs. 1,50,000 from Provincial funds was sanctioned by Government in consideration of the expenditure incurred by the Commissioners on account of measures for the prevention of plague. The Municipal Commissioners were permitted to raise a loan of Rs. 1,20,000 in the open market in connection with the new scheme of drainage, but the loan was not floated. In 1900–1901 the receipts

Charges.

under 'Advances recovered' amounted to Rs. 60,676, while in the year under report Rs. 1,03,280 were recovered. The gross charges fell from Rs. 25,94,857 in 1900–1901 to Rs. 19,37,946; the difference of Rs. 6,56,911 was mainly due to the fall in the expenditure on 'New Works—Drainage' from Rs. 8,33,030 to Rs. 2,74,999 and the decrease under 'Advances recoverable' from Rs. 1,00,917 to Rs. 12,952. The variations in expenditure under these and other heads have been dealt with in Chapter III, paragraphs 62 to 71, Municipal Administration. The closing balance was Rs. 2,38,896 or Rs. 1,24,237 less than the opening balance.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICES.

DETAILS OF CENSUS.

The various Censuses which have been taken.

1. The last census of the Presidency was taken on the night of the 1st March 1901. It was the fourth regular enumeration of the population which has been made, the first having been undertaken in 1871 and the two others at intervals of ten years thereafter. Prior to 1871, estimates of the population had been made through the agency of the ordinary village staff of the Revenue department. The first of these attempts took place in 1821-22 and a second followed in 1836-38. In the fifteen years between 1851 and 1866, quinquennial returns were compiled by the Board of Revenue. All of these, however, were rough estimates rather than actual computations, and the figures in them are worthless.

2. The final enumeration in 1871 was taken on the night of the 14th November of that year. In 1881, the enumeration was made on the night of the 17th and on the morning of the 18th February. Statistics regarding the civil (or conjugal) condition of the people, their languages and their birth-places were collected for the first time, and more detailed enquiry than before was made into their occupations and the sub-divisions of the various castes. The most striking point about the statistics of this enumeration was the light they threw upon the effects of the great famine of 1876. The third census was taken on the night of the 26th February 1891. The information collected at it was much the same as in 1881, but more attention was paid to the subjects of caste and sect, and a return of those who could read and write English was obtained.

3. In 1901, sub-castes and sects (except the sects of Christians) were not recorded, but otherwise the information obtained comprised the same particulars as in 1891, while in addition statistics of the literacy of the people in the main vernaculars and of the occupations of certain selected castes were collected, and the particulars of occupations shown in the published figures were more elaborate than before, persons actually working at each means of subsistence being distinguished from those who merely depended upon the earnings of others gained from it. A report in four volumes,—Part I, the Report proper; Part II, the Imperial Tables, giving statistics by districts and states; Part III, the Provincial Tables, showing figures by taluks; and Part IV, describing the administration of the census,—was published in 1902. Detailed statistics and particulars will be found in this, and the following lines merely summarise the more noteworthy of them.

Procedure in 1901.

4. The procedure at the actual enumeration was, in its main principles, much the same as on previous occasions. As 94 per cent. of the population are totally illiterate, it was not possible to follow the practice obtaining in western countries and merely supply each householder with a "schedule" for the entry of the particulars of the members of his family and call for it again subsequently. It was necessary to provide a literate agency which would be able to write up for the whole of the people the particulars which, with the rarest exceptions, they were unable to enter for themselves. The Presidency was accordingly marked out into "blocks" containing about 30 houses each, and an "enumerator" was appointed to each of these to fill up the schedules for the persons found in it on the night of the census. The blocks were grouped into compact "circles," containing some 20 blocks apiece, which were under the control of "supervisors," and these were again arranged into "charges," comprising on an average some 14 circles, to each of which a "charge-superintendent" was appointed. Supervisors and charge-superintendents were usually officials in the employ of Government, and

were responsible for the accuracy of the work in the areas they controlled. There were 220,885 enumerators, 14,277 supervisors and 1,077 charge-superintendents.

5. In certain areas, called the "non-synchronous tracts," where the difficulty of getting about the country made a night census impossible, or where there were not enough enumerators to enable it to be finished in one day, the enumeration was made by day-light on the morning of the 2nd March, or was even spread over several weeks before that date. Except in the wildest of these tracts there was a Preliminary and a Final Enumeration. The former took place during January and February and consisted in the entry by the enumerators in the schedules of particulars for all persons then resident in each block. This was thereafter very thoroughly checked by the superior members of the census staff. At the Final Enumeration, which occurred on the night of the 1st March, the enumerators went round their blocks again and corrected the previous entries with reference to the changes in the inhabitants thereof which had occurred in the interim,—striking out the entries for persons no longer present and filling up the necessary particulars for new arrivals. Special arrangements were made for the enumeration of travellers by road, rail, river, sea and canal, and of the houseless poor.

6. The morning after the census the enumerators met their supervisor at a spot previously agreed upon and added up the totals of the houses, the males and the females entered in their schedules. The supervisor compiled the total for his circle and sent it by the quickest route to the Tahsildar of the taluk, who similarly compiled totals for the taluk and sent them at once to the Collector of the district. Collectors telegraphed the totals so obtained to the Census Commissioner for India and to the Provincial Superintendent of Census. The last of these telegrams was received on the 8th March, or within a week after the enumeration, and the difference between the "provisional total" of the population of the Presidency entered in them and the figures eventually arrived at by the central census offices, and entered in the various statistical tables, was only ·024 per cent., or 24 persons in 100,000.

7. On the arrival of the schedules (there were 30 tons of them) in the central census offices, the entries in them were abstracted and tabulated by what is known as "the slip system," the cardinal principle of which was borrowed from recent practice on the Continent, and was entirely new to India. Full particulars of this system will be found in Part IV of the Report above referred to. Owing mainly to its superior economy, the 1901 census cost Rs. 7-5-5 per thousand of the population as against Rs. 13-4-0 in 1891, the actual reduction in the expenditure which was effected amounting to Rs. 1,86,000.

Area and population.

8. Excluding its Feudatory States, the area of the Madras Presidency is 141,705 square miles, or about 20,000 square miles larger than the United Kingdom, and its population is 38,199,162, which is slightly greater than that of the United Kingdom at the census of 1891. Particulars by districts and by the five natural divisions into which they were grouped in the census statistics will be found in the appendix to this volume. The largest and most populous district is Vizagapatam, which has an area of 17,200 square miles and 2,900,000 inhabitants,—a sufficiently heavy burden for the shoulders of one Collector. The smallest is Madras City with an area of 27 square miles, but the least populous is the Nilgiris which has only 111,000 inhabitants, or less than a fourth of the number living within the Municipality of Madras. Excluding the exceptional cases of Madras City and the Nilgiri plateau, the average area of a district is 7,036 square miles, or rather less than that of Wales, and its average population is 1,879,000, or considerably more than that of Wales. Of the total population 4,275,178, or 11 per cent., live in towns and the average population of a town is 18,270. In the Presidency as a whole there are 1,029 females to every 1,000 males.

Density of the population.

9. The density of the population per square mile of the Presidency taken as a whole, which fell from 227 in 1871 to 221 in 1881 (after the great famine of 1876), and rose again in 1891 to 253, advanced in 1901 to 270, which is greater than that of any Province in India except Bengal and the United Provinces, is twice as great as that of Scotland and is equal to that of Germany. The figures

in the appendix give the density of each district. The district with the largest population per square mile is Tanjore (561), while, excluding the three Agencies, the Nilgiris and Kurnool,—in all of which there are large tracts covered with hill and jungle,—those with the smallest are Anantapur and Cuddapah, which carry only 142 and148 persons, respectively, per square mile of their area. The variations in density between the different censuses show that during the past decade Gódávari and South Arcot have each added as many as 35 persons per square mile to their existing population, and that in Malabar there are 100 more people to every square mile than there were thirty years ago, while in Cuddapah and Kurnool, on the other hand, there are 14 fewer.

10. Excluding Ganjám and Vizagapatam and the Agencies attached to them, where the area statistics are uncertain, there are 27 taluks in which the density is over 500 persons to the square mile, that is to say, is greater than the density of England and Wales at the census of 1891. Excluding British Cochin, which is a town rather than a taluk in the ordinary sense of the term, the taluk in which the people are thickest is Cocanada in Gódávari district, where they number 1,125 to the square mile. Ponnáni taluk in Malabar (1,122) and Kumbakónam taluk in Tanjore (1,096), which came first and second in the list in 1891, are now respectively second and third. At the bottom of the scale comes the Yellavaram taluk of the Gódávari Agency with only 31 people to the square mile. Outside the Agencies the only tracts in which the density falls to less than 100 persons to the square mile are, with one exception, those which are mainly hill and jungle. This exception is the Kalyandrug taluk of Anantapur.

Towns and villages.

11. In census phraseology a "town" comprised all municipalities of whatever population (only three of them, however, contain less than 10,000 persons) and certain other places selected in accordance with definite canons laid down at the time. A "village" was in almost all cases merely the revenue village, which is an area arranged by the revenue authorities as constituting a convenient unit for administration by the ordinary staff of village officers. There were in the Presidency 235 such towns and 55,065 inhabited villages. Of the eleven per cent. of the people of the Presidency who live in towns, one-half inhabit towns with a population of over 20,000 and one-third those containing between 10,000 and 20,000 persons. Excluding Madras City, Tinnevelly contains the largest urban population of any district, and then come Tanjore and Madura. The figures for each district will be found in the appendix. But in Tinnevelly there is no town of over 50,000 inhabitants, while Tanjore has three and Madura one. Anantapur, Cuddapah and the Nilgiris have no towns in which there are as many as 20,000 persons.

12. The eleven towns following are the only ones in which there are over 50,000 people:—Madras 509,346, Madura 105,984, Trichinopoly 104,721, Calicut 76,981, Salem 70,621, Kumbakónam 59,673, Bellary 58,247, Tanjore 57,870, Negapatam 57,190, Coimbatore 53,080 and Cuddalore 52,216. Thirty-two other towns contain over 20,000 souls. Of every 100 persons in the Presidency as a whole, 91 are Hindus or Animists, six are Musalmans and three are Christians, but in every 100 of the town population the corresponding numbers are respectively 82, 13 and 5. In the towns females are more numerous than in the country, but they are proportionately fewer than they were ten years ago, numbering 1,038 to every 1,000 males against 1,047 in 1891. In the eleven largest towns, where the demand for hard manual labour is greatest, women are fewer in proportion to the other sex than in the Presidency as a whole, and the ratio has fallen steadily at each of the last three censuses.

13. There has been a striking increase in the town population during the decade, it being 25 per cent. greater than it was ten years ago, although the people as a whole have increased by only a little over 7 per cent. There is reason to believe that a marked movement into the towns is in progress.

House-room.

14. The total number of occupied houses in the province is 7,206,108, of which 739,314 are in towns and 6,466,794 in villages. Since 1891 houses have increased by 6 per cent.,—those in villages by 5 per cent. and those in towns by no less than 21 per cent. In the Presidency as a whole, each house contains on an average five persons, and this number has remained the same for the last thirty years. In the towns there is one person more to every two houses than in the

villages. Excluding Madras, the district with the highest average population per house is South Arcot, while the average number of houses per square mile is highest in Tanjore.

Madras City.

15. The population of Madras is 509,346, or more than that of either Birmingham or Manchester at the census of 1891, and it is the third largest town in the Indian Empire. The density of the population of the city as a whole is greater than that of any other town in the Presidency, but that of its outlying divisions,—the first, fourth, sixth and eighth,—is less than that in several cities in the districts. The average number of persons in each house in Madras City is nine and the average number of houses per square mile is 2,062. The figures for these particulars in the various divisions follow the density of the population and are each of them highest in the second, third, fifth and seventh divisions, which form the centre of the city and are its most thickly-peopled quarters. The population of the town increased during the decade by 12·6 per cent., but much of the rise was due to immigration from Chingleput and North Arcot districts, for the number of people found in the city on the night of the census who returned themselves as having been born in it was only 7·2 per cent. more than in 1891. These people numbered 68 per cent. of the inhabitants against 72 per cent. in 1891. There are only 984 females to every 1,000 males in the city, and the proportion of the former to the latter has been getting steadily smaller at every census since 1871. The second division, the heart of Black Town, is the most essentially Hindu in its population; the seventh, containing Triplicane and its mosque, is the most popular with Musalmans; and the fifth, which includes the Eurasian quarters in Vepery, contains a larger proportion of Christians than any other.

Variation in population.

16. Between 1871 and 1881, owing to the great famine of 1876, the population of the Presidency decreased by 1·5 per cent. In the next ten years there was a rebound after the famine and the rate of increase was 15·7 per cent., which was undoubtedly higher than the normal. In the decade 1891–1901 the increase was 7·2 per cent.,—6·9 per cent. in males and 7·5 per cent. in females. This decade was not a prosperous one. Plague checked trade and enterprise, and there were three scarcities in the north-eastern and the Deccan districts. The sharpest advance in population was in Kistna (16·1 per cent.) and the smallest in Tanjore (0·8 per cent.). The population of Vizagapatam Agency decreased by one per cent. The percentages of variation in the different districts are given in the appendix. It is not possible to accurately account for these, as the official statistics of births and deaths and of immigration and emigration are not sufficiently precise. Migration within the Presidency had no considerable share, however, in the changes in the population of any district except Madras, and there is also very little immigration into Madras from other Provinces. The figures in the appendix show that nearly 96 per cent. of the population were born in the district in which they were found on the census night and that another 3 per cent. were born in districts or states adjoining. So only one per cent. were born in areas which were not contiguous. The chief movement which is taking place is from this Presidency to other countries. The numbers of the emigrants to Assam, Bengal, Burma, Ceylon, Coorg, Cochin, Mysore and Travancore have all increased largely in the last twenty years, and census statistics show that Burma now contains 190,000 persons who were born in Madras, Mysore 237,000 and Ceylon 430,000.

Religion.

17. Of the population of this Presidency 34,436,586 persons (89·16 per cent.) are Hindus, 2,477,610 (6·42 per cent.) are Musalmans, 1,038,854 (2·69 per cent.) are Christians, 641,825 (1·66 per cent.) are Animists, 27,431 (0·07 per cent.) are Jains and 760 follow ten religions other than these. Of the Christians more than 96 per cent. are natives of India.

18. Since 1891, the Hindus have advanced by 6·3 per cent., the Musalmans by 9·1 per cent., the Christians by 18·1 per cent. and the Animists by 35·7 per cent. There is reason for supposing that Musalmans and Christians are more prolific than Hindus, and moreover their strength is increased by conversions from Hinduism, especially from its lower classes. The abnormal increase of 35·7 per cent. which occurred among Animists during the decade is no indication that this form of belief is on the increase, but merely that the line between the followers of Animism and Hinduism was more accurately drawn than before. In the censuses of 1871 and

1881 no difference was made between these two religions and though in 1891 the instructions provided for their differentiation a large number of persons who were really Animists failed to return themselves as such.

19. Hindus are proportionately most numerous in the north-eastern and southern parts of the province, Musalmans on its west coast and in the Deccan districts, and Christians in the south and west. Detailed particulars for each district are given in the appendix. Hindus and Animists form 80 per cent. of the population in every district except Malabar,—which, owing to its being the home of the Máppillas, contains more than one-third of all the Musalmans in the Presidency,—and 85 per cent. of it in all the remaining districts except Kurnool, Madras, the Nilgiris and South Canara. In Ganjám, Vizagapatam and Gódávari they number over 97 per cent. of the people, these three districts containing hardly any Musalmans or Christians. Christians are most numerous in Tinnevelly, Madura, Kistna, Tanjore and South Canara, and fewest in Ganjám, Vizagapatam, Bellary and Anantapur. The figures for each district will be found in the appendix. In proportion to the rest of the population, however, they are commonest in the Nilgiris, Madras, Tinnevelly and South Canara. No particularly noteworthy variations have occurred during the last twenty years in the relative proportions of the Hindus and Musalmans in the several districts.

20. Statistics of sect were not compiled for Hindus or Musalmans as it is well known that the former are mostly either Saivites or Vaishnavites and that the latter are mostly Sunnis with a sprinkling of Shiahs. The sects of Christians were, however, recorded. Of the 1,038,854 followers of this faith 642,863, or 61·9 per cent., belong to the Church of Rome; 139,897, or 13·5 per cent., to the Anglican Communion; and 119,227, or 11·5 per cent., are of the Baptist persuasion. The only other considerable totals are those of the Lutherans (78,036) and the Congregationalists (25,658). The Roman Catholics are proportionately far more numerous than any other body in the south and on the west coast, except in Tinnevelly, where they divide the honours with the Church of England. Congregationalists are relatively numerous only in Cuddapah and Anantapur. Baptists are the most prominent denomination in Kistna, Nellore, and Kurnool, and Lutherans form a large proportion of the Christians in Vizagapatam, Gódávari and Kistna. The Europeans and Eurasians of the Presidency mainly belong either to the Anglican Communion or to the Roman Catholic Church.

Age.

21. Owing in part to the ignorance of the mass of the people as to their exact ages and in part to reasons for misstatements on the matter which sometimes weigh with them, the ages returned at an Indian Census are seldom accurate. Broad inferences from them are nevertheless permissible. The traces of the 1876 famine are still discernible in the figures of some of the districts, the numbers of the people who were born at about the time it occurred being abnormally small. Among the Animists, who are mainly jungle tribes, the infant mortality is high and the number of those who live beyond sixty is small. Musalmans and Christians are apparently more prolific than Hindus, the proportion of children under five years of age among them being higher than among these last. Emigration has affected the ages of the people in the south and east of the province, as the proportion of those in the prime of life,—that is, between twenty and forty years of age,—is smaller there than elsewhere, owing to the considerable numbers of such persons who have left the country to seek a livelihood in other places.

Sex.

22. There are 545,074 more females than males in the province, or 1,029 of the former to every 1,000 of the latter. In twelve out of the twenty-five * districts, however, there are still fewer females than males. The three Agencies are among them, and in these the deficiency is probably due to indifferent enumeration. Two others of them are Madras City and the Nilgiris. In the former the preponderance of males is probably due to the urban nature of the district, while in the latter it is owing to the fact that among the imported labourers on its coffee estates the men largely preponderate. In the remaining seven of these twelve districts—Kistna, Nellore, Cuddapah, Kurnool, Bellary, Anantapur and Chingleput—there is considerable ground for supposing that this deficiency of females is

* In the Census statistics the three agencies are treated as separate districts.

to no small extent due to the deaths among young girls which are occasioned by forcing maternity upon them while they are still immature.

Civil condition.

23. The three distinctive features of the returns of civil condition in an Indian province are the universality of marriage, the early age at which it takes place and the high ratio which the number of widows bears to the number of widowers. The appendix gives figures of the civil condition of 10,000 persons of each sex and illustrates these three points. In England and Wales in 1891, 41 per cent. of the males, and 39 per cent. of the females over fifteen years of age were unmarried, while in Madras the corresponding figures are respectively only 25 and 5; in the same country not even one male or female in 10,000 under the age of fifteen was married or widowed, while in this Presidency 1 per cent. of the boys and 9 per cent. of the girls under this age were married; in England and Wales there were 231 widows to every 100 widowers, while here there are 506.

24. But the different religious communities of the Presidency take very varying shares in producing these results. Marriage is not so universal with Musalmans and Christians as with Hindus, nor does it take place so early, and among the followers of these two faiths widows are proportionately rarer than among Hindus. Compared with the figures of the last census, however, there is a satisfactory decline in the case of all the main religions in the universality of matrimony and a rise in the age at which it occurs, while among Hindus and Christians there is in addition a fall in the proportion of widows. These improvements are found also among the Bráhmans. The statistics of civil condition by caste show that early marriage and enforced widowhood are decidedly more common among the Telugu people than among those who speak Tamil or Malayálam.

25. In the Presidency as a whole there are 1,056 wives to 1,000 husbands—1,057 in rural areas and 1,014 in cities. The proportion is highest among Musalmans (1,100) and least among Christians (1,045). Among Hindus it is 1,054. In the Agency tracts there are alleged to be more husbands than wives, but this is doubtless due to the omission of women from the returns. In the Deccan districts there are 1,015 wives to every 1,000 husbands, but in the east of the Presidency the emigration of the men has raised the ratio to a figure considerably in excess of this.

Education.

26. Of every 1,000 persons in the Presidency only 63 are "literate," which in census phraseology means able to read and write,—of every 1,000 males only 119 and of every 1,000 females no more than 9. Particulars by districts will be found in the appendix. Of 1,000 males of the Hindu, Musalman and Christian religions, 116, 141 and 198, respectively, can read and write; and of 1,000 females, respectively 7, 9 and 91. Putting it another way, nearly 94 per cent. of the Hindus, 93 per cent. of the Musalmans and 86 per cent. of the Christians are totally uneducated. The Animists are practically all of them illiterate, only one in 212 of the men among them and only one in 10,191 of their women being able to read and write. The Christians are far in advance of the other religious communities, especially in female education, and this predominance is maintained even if European and Eurasian Christians are excluded.

27. Excluding Madras and the Nilgiris, the circumstances of which are exceptional, the best educated districts are the three rich ones of Tanjore, Malabar and Tinnevelly. Next, but after a considerable interval, come Chingleput, Madura and South Arcot. At the other end of the scale are Salem, Vizagapatam and the three Agencies. The statistics of education by caste and race show that the Eurasians are by far the best educated, that after them come the Bráhmans, that nevertheless several of the non-Bráhman castes are very close behind the latter, and that the Malayálam castes are superior to the corresponding Tamil castes, and the Tamils to the corresponding Telugus.

28. Of every 1,000 of the population only five can read and write English, nine in every 1,000 males and one in every 1,000 females. Christians come first in knowledge of the language, then Hindus and Musalmans last. Excluding Europeans and Eurasians, Native Christians are, however, second to certain of the divisions of Bráhmans. There are only six castes in which even 10 per cent. of the literate of both sexes are literate in English. Eurasians, Native Christians and Bráhmans are again prominent among these.

29. For the first time in the history of Madras censuses, particulars were collected in 1901 of the vernaculars which the literate population could read and write. The figures in the margin show the number in every 1,000 persons of either sex speaking the four principal languages who were literate in those languages.

	Males.	Females.
Tamil	168	9
Telugu	77	5
Malayálam	166	28
Canarese	105	6

30. The castes and languages of the people have already been referred to in Chapter I, pages 94 to 101. **Language and caste.**

31. Four kinds of infirmities were recorded at the census, namely, insanity, deaf-mutism from birth, total blindness and corrosive leprosy. There were 7,276 insane persons, 24,881 deaf-mutes, 34,409 blind people and 13,563 lepers in the Presidency on the 1st March 1901. Of these, as many as 240 were suffering from more than one of these afflictions, the commonest combination being insanity and deaf-mutism, and there was one unhappy child who was not only insane and deaf-mute but blind as well. A comparison of the figures with those of the former censuses shows that the proportion of the population which is afflicted with each of the infirmities is not only much smaller than it was thirty years' ago but has even decreased during the decade 1891–1901, though in the case of leprosy the decline is fractional. The figures are given in the margin. **Infirmities.**

	Number in a million who are			
	Insane.	Deaf-mutes.	Blind.	Lepers.
1871 ...	446	1,313	1,946	441
1881 ...	325	536	1,597	466
1891 ...	215	760	1,022	353
1901 ...	188	644	891	351

32. The scheme of classification of the occupations returned at the 1901 census is the same in its essentials as that followed in 1891. The various means of subsistence are first divided into eight "classes," these classes are next subdivided into 24 "Orders" and these in turn are split up into 79 "Sub-orders." The Sub-orders are finally divided into 520 "groups." Figures are given in the statistical tables showing the number of each sex who actually work at the occupations in each group, the number of these who have, in addition, an interest of some kind in land and the number (both sexes together) who, without being themselves actual workers at them, are dependent upon the occupations in each group. **Occupation.**

33. The most noticeable point about the figures is the rural simplicity of the callings by which the bulk of the people subsist and the comparative rarity of industrial callings other than weaving. Of the population of the Presidency 68·9 per cent. are agriculturists. Of these, more than 95 per cent. are themselves cultivators, tilling land which they either own or rent from others; of these cultivators 72 per cent. cultivate land which is their own property, or, in other words, are peasant proprietors. In considering these figures it must, however, be remembered that the small agriculturist frequently combines in himself more than one of the rôles which the statistics seek to distinguish, often owning a piece of land which he partly cultivates himself and partly leases out, hiring another piece from some one else and eking out his earnings by working on the land of his neighbours. Of those who returned themselves as agricultural labourers, only 13·6 per cent. are farm servants engaged for long terms, the rest being day-labourers. In addition to the population directly supported by agriculture, over 7 per cent. of the rest of the people entered themselves as subsisting in part by the land. Prominent among these "partial agriculturists" are the village officers (possession of land in the village in which they are employed is a necessary qualification for some classes of these), the village and family priests, the lawyers, the village artisans, the pensioners, the toddy-drawers and the money-lenders. Nearly 4,000 beggars also returned themselves as eking out their earnings from begging by work upon the land.

34. Next to agriculture, but after a long interval, the commonest occupations are those connected with the preparation and sale of food, drink and stimulants (including toddy), which support 6·6 per cent. of the population, and those relating to textile fabrics and dress, which include all the weavers and employ 4·2 per cent. of it. Excepting these three, the only other broad classes of occupations which support more than 2 per cent. of the people are those connected with "Personal,

household and sanitary services," and those which are included under "Earthwork and general labour." The figures in the appendix show the percentage of the population of each district who are supported by the agricultural, "Industrial" and "Professional" callings.

35. The census statistics show separately the means of subsistence of the inhabitants of the eleven towns in the Presidency which have a population of over 50,000 persons each. Among these people, as was only to be expected, agriculture is no longer the main occupation. The provision and sale of food, drink and dress is the chief source of income of this urban population, and next come banking, money-lending and general trade and after them the callings connected with the transport and storage of merchandise.

36. A new feature of the occupation statistics of 1901 is the compilation, for the first time in the history of Indian Censuses, of figures showing the callings which are followed by the members of certain castes. These show in a striking manner that the various castes no longer closely adhere to the occupations which have been traditionally connected with them but turn their attention to any that promise to be profitable. The higher castes have taken to means of subsistence which they would once have considered derogatory to their position and the lower ones are invading fields from which they were formerly excluded.

APPENDIX.

APPEN

Natural Divisions, Districts and States.	Area in square miles.	Population.	Density of population per square mile.	Percentage population living in		Percentage variation in population during 1891–1901.	Number in 10,000 born in		
				Towns.	Villages.		Natural Division, District or State where enumerated.	In contiguous Districts or States in India.	Non-contiguous territory in India.
1	2	3	4	5	6	7	8	9	10
Agency { Ganjám	3,483	321,114	92	...	100	+ 4·5	9,897	103	...
Agency { Vizagapatam	12,622	850,988	67	...	100	− 1·0	9,861	135	4
Agency { Gódávari	3,140	159,842	51	...	100	+ 14·7	9,341	632	27
Total, Agency Division ...	**19,245**	**1,331,944**	**69**	**...**	**100**	**+ 1·9**	**9,807**	**187**	**6**
Ganjám	4,889	1,689,142	345	6	94	+ 6·3	9,834	132	34
Vizagapatam	4,600	2,082,662	453	9	91	+ 7·2	9,910	56	33
Gódávari	4,832	2,141,917	443	11	89	+ 10·4	9,268	670	61
Kistna	8,498	2,154,803	254	9	91	+ 16·1	9,332	542	125
Nellore	8,761	1,496,987	171	8	92	+ 2·3	9,739	216	44
Total, East Coast Division ...	**31,580**	**9,565,511**	**303**	**9**	**91**	**+ 8·8**	**9,596**	**341**	**62**
Cuddapah	8,723	1,291,267	148	9	91	+ 1·5	9,644	319	37
Kurnool	7,578	872,055	115	5	95	+ 6·6	9,455	510	35
Banganapalle	255	32,264	127	...	100	− 9·1			
Bellary	5,714	947,214	166	18	82	+ 7·5	9,271	605	117
Sandur	161	11,200	70	...	100	− 1·7	7,962	1,587	450
Anantapur	5,557	788,254	142	14	86	+ 8·3	9,338	595	66
Total, Deccan Division ...	**27,988**	**3,942,254**	**141**	**11**	**89**	**+ 5·2**	**9,368**	**565**	**65**
Madras	27	509,346	18,865	100	...	+ 12·6	6,846	1,329	1,775
Chingleput	3,079	1,312,122	426	14	86	+ 9·1	9,337	557	100
North Arcot	7,386	2,207,712	299	8	92	+ 4·4	9,599	322	78
Salem	7,530	2,204,974	293	8	92	+ 12·4	9,674	287	37
Coimbatore	7,860	2,201,752	280	7	93	+ 9·8	9,745	223	31
South Arcot	5,217	2,349,894	450	7	93	+ 8·6	9,614	314	70
Tanjore	3,710	2,245,029	605	16	84	+ 0·8	9,626	270	96
Trichinopoly	3,632	1,444,770	398	11	89	+ 5·2	9,228	685	81
Pudukkóttai	1,100	380,440	346	5	95	+ 2·0	9,109	835	41
Madura	8,701	2,831,280	325	12	88	+ 8·5	9,722	246	30
Tinnevelly	5,389	2,059,607	382	23	77	+ 7·5	9,868	85	45
Total, South Division ...	**53,631**	**19,746,926**	**368**	**14**	**86**	**+ 7·3**	**9,549**	**343**	**104**
Nilgiris	957	111,437	116	24	76	+ 11·7	5,888	2,933	1,057
Malabar	5,619	2,790,281	481	8	92	+ 5·6	9,889	63	46
South Canara	4,025	1,134,713	282	5	95	+ 7·4	9,868	85	45
Total, West Coast Division ...	**10,777**	**4,036,431**	**375**	**7**	**93**	**+ 6·0**	**9,773**	**148**	**73**
Grand Total ...	**143,045**	**38,623,066**	**270**	**11**	**89**	**+ 7·2**	**9,575**	**339**	**83**

DIX.

Number in 10,000 who are				Number of the Christian population.	Civil condition of 10,000						Number in 1,000 who are literate.			Percentage to population of the population supported by		
					Males.			Females.								
Hindus.	Musalmans.	Christians.	Animists.		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Total.	Males.	Females.	Agriculture.	Industrial callings.	Professional callings.
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
3,236	1	29	6,734	923	5,741	3,844	415	4,865	3,937	1,198	7	13	...	78	12	...
6,759	18	37	3,185	3,155	4,999	4,616	385	4,052	4,773	1,175	9	18	1	82	9	...
9,564	131	46	259	729	5,502	4,059	439	4,217	4,085	1,698	17	31	4	82	9	1
6,246	**28**	**36**	**3,690**	**4,807**	**5,237**	**4,364**	**399**	**4,269**	**4,488**	**1,243**	**10**	**18**	**1**	**81**	**10**	...
9,589	35	14	362	2,426	4,771	4,912	317	3,040	5,010	1,950	44	89	4	65	18	2
9,632	108	20	240	4,191	4,794	4,877	329	2,982	4,946	2,072	32	61	4	69	18	1
9,727	193	75	5	16,066	5,420	4,270	310	3,472	4,287	2,241	46	87	8	68	18	1
8,877	613	471	39	101,414	5,362	4,321	317	3,627	4,438	1,935	50	92	7	69	16	1
9,060	554	360	26	53,948	5,696	3,902	402	3,642	4,084	2,274	48	89	6	64	20	1
9,386	**298**	**186**	**130**	**178,045**	**5,205**	**4,463**	**332**	**3,345**	**4,566**	**2,089**	**44**	**83**	**6**	**67**	**18**	**1**
8,847	1,003	147	3	18,923	5,730	3,670	600	3,543	3,853	2,604	43	81	4	71	16	1
8,357	1,234	390	18	34,043	5,446	3,983	571	3,619	4,082	2,299	42	79	4	72	16	1
7,947	1,932	92	29	297	5,373	3,910	717	3,465	3,899	2,636	43	83	3	62	23	1
8,920	1,008	53	2	5,066	5,399	4,033	568	3,867	4,245	1,888	46	86	3	71	18	1
8,162	1,805	33	..	37	5,610	3,706	684	3,739	3,970	2,291	57	109	5	72	15	2
9,113	747	34	101	2,675	5,647	3,726	627	3,808	3,975	2,217	42	77	4	69	18	1
8,800	**1,014**	**155**	**26**	**61,041**	**5,568**	**3,839**	**593**	**3,691**	**4,023**	**2,286**	**43**	**81**	**4**	**71**	**17**	**1**
8,062	1,126	804	...	40,958	5,253	4,367	380	3,758	4,355	1,887	227	360	91	3	42	9
9,567	229	202	...	26,466	5,785	3,885	330	4,237	4,124	1,639	78	144	10	67	19	2
9,369	467	104	23	22,964	5,808	3,795	397	4,086	3,993	1,921	61	116	6	74	15	1
9,600	311	89	...	19,642	5,652	3,990	358	4,260	4,038	1,702	38	74	4	74	16	1
9,656	230	86	27	18,687	5,599	4,042	359	4,253	4,079	1,668	51	97	6	65	22	2
9,416	277	283	...	66,465	5,709	3,969	322	4,172	4,145	1,683	71	138	5	80	10	1
9,062	548	387	...	86,979	5,453	4,085	462	3,744	4,145	2,111	101	203	9	65	19	3
9,169	300	531	...	76,660	5,506	4,131	363	3,897	4,136	1,967	66	129	8	73	13	2
9,298	322	380	...	14,449	5,564	4,058	378	4,025	4,122	1,853	76	156	4	75	10	2
9,009	596	395	...	111,837	5,546	4,055	399	4,102	4,107	1,791	72	145	5	74	14	1
8,732	495	773	...	159,213	5,555	4,025	420	4,074	4,102	1,824	100	189	15	66	21	2
9,243	**417**	**326**	**6**	**644,520**	**5,610**	**4,009**	**381**	**4,081**	**4,102**	**1,817**	**75**	**143**	**9**	**70**	**17**	**2**
7,777	526	1,332	359	14,845	5,461	4,258	281	4,469	4,233	1,298	116	172	49	61	12	2
6,825	2,985	185	3	51,493	5,983	3,685	332	4,557	3,716	1,727	101	172	30	62	25	3
8,056	1,118	741	...	84,103	5,813	3,814	373	3,909	4,108	1,983	58	111	9	75	16	2
7,198	**2,392**	**373**	**12**	**150,441**	**5,920**	**3,738**	**342**	**4,369**	**3,841**	**1,790**	**89**	**155**	**25**	**66**	**22**	**3**
8,916	**642**	**269**	**166**	**1,038,854**	**5,525**	**4,088**	**387**	**3,896**	**4,195**	**1,909**	**63**	**119**	**9**	**69**	**18**	**2**

BIRTHS AND DEATHS. (1901.)

[*The thirty-eighth annual report of the Sanitary Commissioner, Madras, 1901; Judicial and Administrative Statistics of British India, XIII—Vital Statistics, pages 248 to 279, XX—Wild animals and snakes, pages 374 to 382.*]

Registration.

37. Registration of births and deaths was compulsory in all municipalities and in 441 villages under Madras Act III of 1899; this Act was in force in 400 villages in 1900. The population relating to which returns were received from the Sanitary Commissioner was 38,202,438, of whom 2,897,113, were in urban circles including municipalities and 35,305,325 in rural circles; these figures include the population in certain areas in zamindaris and agency tracts, for which no returns or very incorrect statistics were received, but the population of which cannot be excluded from the figures given in the report on the census of 1901; Europeans and Eurasians were excluded from the returns.

Births.

The number of births registered throughout the Presidency in 1901(935,749) was 113,450 less than in 1900 (1,049,199), and the birth-rate fell from 31·8 to 25·1 per mille; the birth-rate for 1900 was calculated on the population according to the census of 1891; if the birth-rate for 1901 were calculated on the same population it would be 28·3 per mille. The figures for Ganjám and Madura districts, where the birth-rates were 20·5 and 16·1 per mille respectively, are inaccurate as they include large zamindari tracts, but the birth-rates in Chingleput, North Arcot, Madras, Kistna and Kurnool fell by 13·6, 9·8, 9·0, 8·6 and 7·5 per mille respectively. The birth-rate in municipalities fell from 38·5 per mille to 32·6 per mille, or 36·2 per mille calculated on the population of 1891; the most marked diminutions in birth-rate occurred in Vellore, Trichinopoly, Kurnool, Conjeeveram, Calicut, Masulipatam and Madras.

Deaths.

The number of deaths registered throughout the Presidency rose by 25,281 to 796,140 and the death-rate was 21·3 per mille. The death-rate in 1900 was 23·4 per mille and in 1899 was 20·1 per mille, these figures being calculated on the population in 1891. The death-rate of infants rose from 164·9 per mille of registered births to 166·2 per mille, but is probably still much below the actual death-rate, as the calculated rate for the city of Madras is 295 per mille; in Malabar district it was only 98·9 per mille; this fact is attributed to inaccurate registration as houses are scattered and it is customary to bury infants in private grounds; the Governor in Council has directed that continuous inquiries should be made in selected villages to ascertain the causes of defective registration and the amount of the defect. The death-rate of male infants was 174·6 per mille and that of female infants was 157·5 per mille; the mortality among female infants exceeded that among male infants in no district except the Nilgiris. The death-rate in municipalities was 35·4 per mille. At Vániyambádi the death-rate was 141·3 per mille on account of the prevalence of plague and cholera. The rate in Madras (55·5 per mille) was exceedingly heavy; it is ascribed to imperfect water-supply, defective and inadequate drainage, and want of 'lungs' in congested areas; these defects cannot be remedied by the municipal commission without a large measure of financial assistance from Provincial or Imperial revenues or both. The mortality exceeded 40 per mille in Bellary (48·1), Cochin (47·6), Ambur (46·5), Arcot (44·9), Nandyal (44·0) and Berhampur (40·5).

Effect of prices.

38. The climatic conditions of the year 1901 were on the whole unfavourable to public health. Moreover the season in other parts of India was unsatisfactory and this affected prices in Madras. The average prices of cholam, ragi and cumbu during the year were 15·6, 15·7 and 15·1 seers (80 tolahs) a rupee respectively, whereas the decennial averages were respectively 20·4, 22·5 and 20·0 seers a rupee; the prices in 1901 were more favourable than in 1900 when the average prices of cholam and ragi, which had been raised mainly on account of severe famine prevailing in other parts of India, were 14·1 and 15·0 seers a rupee. In spite of the fall in prices, the death-rate increased and the decrease in the birth-rate was very marked. A fall in the birth-rate was not unexpected, as the rate of increase from 1881 to 1891 was abnormal on account of the disproportionate mortality among infants and elderly adults during the famine in 1876–77, and the proportion of the number of persons of child-bearing age to the whole population might be reasonably expected to fall 16 or 17 years after the famine began; but this alone is

insufficient to account for the large decrease in the birth-rate; as there is no reason to suppose that marriages were not carried out as usual, it must be ascribed in great part to the influence of high prices on fecundity, as the strain caused by high prices had acted in some districts on the poorer classes for a series of years.

Chief diseases.

39. The number of deaths from cholera rose from 60,662 to 81,370; the mortality from this disease was therefore 2·2 per mille of the whole population; it was particularly high in Salem, Anantapur, Cuddapah and North Arcot, where it amounted to 5·1, 4·5, 4·2 and 4·1 per mille; there were 1,161 deaths from cholera in Madras where the mortality from this cause was 2·4 per mille; the mortality from cholera exceeded 7 per mille in the municipal towns of Vániyambádi (27·7), Calicut (10·6), Nandyal (9·9), Gudiyáttam (7·9), Berhampur (7·8), Mangalore (7·6), Erode (7·4), Salem (7·2), Cochin (7·2). The mortality in all towns was 2·7 per mille, but in towns which had protected water-supplies the rate was 1·97 per mille. The total number of deaths from small-pox fell from 27,692 in 1900 to 26,202; the mortality was 0·6 per mille in municipal areas and 0·7 per mille in rural areas. At Cochin the mortality was 17·8 per mille; this is attributed to the fact that the town adjoins an area under native administration where sufficient attention is not paid to the prevention of the spread of small-pox; the mortality was also high in the municipal towns of Vellore (3·4), Calicut (2·2), Erode (1·9) and Tirupattúr (1·7). During the year 3,960 persons were attacked with plague and 76·6 per cent. of them died. The chief source of infection was the Mysore State. In municipalities there were 1,497 cases, of which 702 and 769 occurred in Bellary and Vániyambádi respectively. At the inspection station of Jalarpet 120 cases of plague were removed from trains. The system of issuing passports was extended to admit of the surveillance of contacts, but compulsory evacuation was not enforced. The number of persons that died from diseases registered as fevers was 294,854; malarial fever was responsible for the highest mortality. The Kurnool district board placed at the disposal of the Sanitary Commissioner a sum of Rs. 500 to enable him to conduct experiments for the extermination of malaria in a village. There appears to be reason to suspect that typhoid fever is more prevalent in the plains than has been supposed hitherto. The mortality from dysentery and diarrhœa is 1·1 per mille for the whole Presidency and 5·0 per mille for the municipal towns; the rate was particularly high in Palamcottah (15·5), Tuticorin (10·1), Madras (9·7), Chingleput (9·4), Gudiyattam (9·2) and Periyakulam (8·0).

Cholera.

Small-pox.

Plague.

Fevers.

Dysentery and diarrhœa.

Deaths from injuries.

40. There were 12,872 deaths from injuries; the death-rate from this cause was 0·3 per mille; of these 1,672 were suicides. The number of persons killed by wild animals and by snakes was 2,022 according to the Sanitary Commissioner's returns and 1,829 according to the statistics furnished by the Board of Revenue; no details are given by the former but from the details given by the latter it appears that 99 persons and 7,666 cattle were killed by leopards, panthers or cheetahs, 83 persons and 2,424 cattle by tigers, 1,614 persons and 1,714 cattle by snakes and that the total number of persons killed by animals was 215. It was reported that 206 persons were killed by animals and 2,053 by snakes in 1900. The numbers of persons killed by snakes in 1901 were high in South Arcot (183) and Tanjore (162); in Vizagapatam 55 persons were killed by tigers and 36 by leopards, panthers or cheetahs. In South Canara 3,241 cattle were killed by leopards, panthers or cheetahs and 496 by tigers. During the year 93 tigers, 688 leopards, etc., and 55 bears were destroyed, and the rewards paid for their destruction amounted to Rs. 4,706, Rs. 11,313 and Rs. 221 respectively. The total amount of rewards (including Rs. 3 for one hyæna) disbursed during the year was Rs. 16,243, of which Rs. 4,443 were paid in Vizagapatam, Rs. 2,495 in Gódávari, Rs. 1,678 in Ganjám and Rs. 1,512 in South Canara. In 1900 Rs. 20,761 were paid as rewards for the destruction of 1,015 animals. Rank undergrowth was removed in 1901 from 1,377 villages at a cost of Rs. 15,177 to the State and to local funds; these figures include 814 villages in South Canara in which nothing was spent from State and local funds; up to the end of the year 1900 the amount expended by Government and local boards was Rs. 1,29,054.

Europeans.

41. As has been already remarked, Europeans and Eurasians were excluded from the returns prepared by the Sanitary Commissioner. There were 112 Registrars of births and deaths under the Births, Deaths and Marriages Registration Act

(VI of 1886) during the year 1901–1902. The numbers of births and deaths registered both declined during the year, the former from 283 to 247 and the latter from 179 to 148. The number of baptisms rose from 1,379 in 1900-1901 to 1,397 and the number of burials fell from 1,217 to 1,171. Of the 1,171 European Christians who died during the year, 400 were under five years of age and 179 were over sixty years of age. Two hundred and twelve deaths were due to fevers, 97 to cholera, 92 to diarrhœa and dysentery, 89 to diseases of infancy and 86 to convulsions.

EMIGRATION AND IMMIGRATION. (1901.)

Regulated emigration.

Natal.

42. On 31st December 1900 there were 1,049 emigrants for Natal in the depot; during the year, 10,179 emigrants were admitted, making the total number of emigrants for Natal 11,228, of whom 7,783 were men and 3,445 were women; of these emigrants 759 were rejected by the medical officer, 136 by the Protector of Emigrants and 2,691 by the agent; fifteen died and 6,576 emigrated in 15 shipments; in 1900, 5,492 persons emigrated to Natal. The emigrants were drawn chiefly from North Arcot (2,785), Madras (1,765) and Chingleput (1,091). Recruiting was most brisk from May to August. During the year 5,145 emigrants for

Mauritius.

Mauritius were admitted to the depot, the number admitted in the year 1900 having been 2,139; of these 1,231 were rejected by the depot surgeon and 10 died in the depot; the number that embarked rose from 1,476 in 1900 to 3,599, of whom 2,551 were men and 1,048 were women; of these emigrants 2,089 came from Madras and 999 from North Arcot; there were 7 shipments during the year. Both depots were kept in good sanitary condition and the emigrants were

French Colonies.

generally treated well. There was no authorised emigration to French colonies; but 738 persons were shipped in May and August 1901 from Pondicherry for Madagascar as passengers though they were really emigrants; of these 126 returned in a pitiable state on account of diseases contracted in the plains; the experiment of sending Indian coolies to Madagascar was a failure.

Non-regulated emigration.

43. The number of passengers who embarked for the Straits Settlements fell from 39,261 in 1900 to 27,950; the decrease is attributed to the favourable character of the season in Tanjore from which 26,478 persons emigrated. The number of passengers who proceeded to Burma and Ceylon also fell from 99,038 and 194,270 to 84,329 and 117,992, respectively; it is not possible to say how many of these were real emigrants; there was a decrease in the number of passengers for Burma from the districts of Vizagapatam, Gódávari and Tanjore and is mainly attributed to the favourable character of the season in those districts. The decline in emigration to Ceylon was due to the same cause. The number of persons who emigrated to other parts of British India advanced from 46,569 in 1900 to 52,446.

Immigration.

44. During the year 238,407 passengers, of whom 10,921 were children, arrived at the several ports in the Presidency; the number of passengers who arrived in 1900 was 236,950. Of the former 89,609 landed in Tinnevelly district, 45,460 in Madura district and 22,717 at Madras, and 114,968 of these immigrants came from Ceylon, 54,488 from Burma and 16,040 from the Straits Settlements. From Natal 371 men returned with savings amounting to Rs. 1,06,530 in the aggregate, and 105 emigrants returned from La Réunion and Guadaloupe with gross savings of Rs. 14,883; information as to the savings brought by 247 emigrants who returned from Mauritius is not available.

Financial.

45. The receipts rose from Rs. 15,909 to Rs. 25,335 on account of the increased emigration to Natal and Mauritius, and the expenditure fell from Rs. 12,569 to Rs. 11,269.

MEDICAL RELIEF. (1901.)

[*Annual returns (triennial report) of the Civil Hospitals and Dispensaries in the Madras Presidency for the year 1901; Judicial and Administrative Statistics of British India, XIV—Hospitals, pages 280 to 289, XV—Lunatics, pages 290 to 302.*]

Institutions and establishments.

46. The medical institutions in the Presidency at the close of the year 1901 included 26 State civil hospitals, 45 police hospitals, 430 local and municipal institutions, 55 unaided private institutions and 23 aided private institutions; the total number (579) was three less than in 1900 owing to the abolition of four police hospitals and one private institution and to the inclusion of two railway medical institutions. The ratio of hospitals and dispensaries, inclusive of the civil medical institutions at Madras, to every thousand of the population fell from ·014 to ·013; the fall was due to the difference in population in 1891 and in 1901, the calculation for 1901 being on the population according to the census of 1901. The number of beds available for patients rose from 5,288 to 5,308, of which 4,617 were in civil medical institutions and 691 in private institutions; the percentage of beds for females rose from 40·37 to 40·54. Clinical instruction or training was given to 118 medical students at the General Hospital, Madras, and to 21 students each at the Government Maternity and Ophthalmic Hospitals.

Relief.

47. The total number of patients treated advanced from 4,922,614 in 1900 to 5,012,969, of whom 2,575,806 were men, 1,143,244 were women, and 1,293,919 were children. The number of in-patients rose from 73,409 to 75,487; there was also an increase in the number of out-patients. The average daily attendance rose from 30,930 to 31,237. Of the patients 72·58 per cent. were Hindus. The number of patients who attended by proxy fell from 7·67 to 7·08 per cent. of the total number treated. The percentage of the in-patients who were cured rose from 57·91 to 58·25, but the percentage of those relieved and discharged otherwise fell from 30·58 to 28·82. The proportion of deaths rose to 9·18 per cent. from 7·69 and 5·73 per cent. in 1900 and 1899 respectively; excluding those admitted in moribund condition, these figures would be 7·67, 5·49 and 4·62 respectively; the marked rise is attributed to the increased number of patients admitted when suffering from cholera (3,262 in 1899, 10,336 in 1900 and 10,833 in 1901); the explanation does not appear to account satisfactorily for the whole increase in the death-rate among in-patients in 1901. The principal diseases treated were local diseases (64·75), including ulcers and diseases of the skin (20·92 per cent.) and diseases of the digestive system (15·33 per cent.), and general diseases (29·93 per cent.) including malarial fevers (10·14 per cent.) and worms (5·49 per cent.). Although there were 81,370 deaths from cholera in the Presidency in 1901, only 10,833 patients were treated for cholera. Excluding from consideration certain operations which have been removed from the list, it is found that the number of persons operated on rose from 147,801 to 150,695; of these 94·54 per cent. were cured and 4·66 per cent. were relieved and discharged; the ratio of deaths was 0·2 per cent. The principal operations performed included 2,273 excisions of tumours, 1,801 obstetric operations and 605 amputations. The number of operations performed by the Dental Surgeon attached to the General Hospital, Madras, rose from 1,028 to 1,183, of which 942 were extractions of teeth. The number of packets of quinine sold to the public at post-offices rose from 5,662 in 1899 and 7,760 in 1900 to 9,833 in 1901.

Financial.

48. The gross income of institutions amounted to Rs. 15,10,655, of which Rs. 6,81,370 (45 per cent.) were contributed from local and other funds, Rs. 4,11,127 (27¼ per cent.) by Government (exclusive of a grant of Rs. 20,000 made by the Madras Municipal Commission for the maintenance of 5 State hospitals) and Rs. 2,79,216 (18½ per cent.) from municipal funds. The amounts of subscription and of cost of diet paid by patients rose from Rs. 46,048 and Rs. 24,649 in 1900 to Rs. 55,597 and Rs. 29,669 respectively. The principal items of expenditure were Rs. 7,78,641 on establishments, Rs. 2,25,040 on European medicines, and Rs. 1,82,231 on diet. The average cost of each patient rose from 4 annas 5·7 pies to 4 annas 6·1 pies; but the average cost of diet of in-patients fell from Rs. 2–15–7 to Rs. 2–13–1. The proceeds of the sale of quinine advanced from Rs. 9,266 to Rs. 9,627.

Lunatic Asylums.

49. As in 1900 there were three lunatic asylums, which together had sufficient accommodation for 920 patients including 136 Europeans. The number of inmates on 1st January 1901 was 559; during the year 155 were admitted; of the total number of patients in the asylums 93 were discharged and 53 died, leaving 568 inmates (432 males and 136 females) at the end of 1901. The daily average number of inmates rose from 545·48 in 1900 to 562·85. Of the new inmates 34 were criminal lunatics. Thirty-three insane persons from Madras city were admitted, 26 from Malabar district, 8 from Bangalore and 8 from Vizagapatam district; of 108 new inmates who had known occupations 29 were coolies, 13 were beggars, 14 were sepoys or soldiers, and 11 were agricultural labourers. In the majority of cases admitted (119) the insanity took the form of mania. Eight inmates escaped; five of them were recaptured, but one of these escaped again and was not again recaptured. Of 391 cases treated in which the cause of insanity was known it was due to moral causes in 113 cases and to epilepsy in 42 cases. The ratio of deaths to the total number of patients treated rose from 8·95 per cent. to 11·58 per cent.; this was due to an outbreak of cholera, of which 7 inmates died; seven others died from tubercle of the lung and 6 from dysentery. The gross receipts were Rs. 1,23,994, of which Rs. 90,235 were received from the treasury; the increase of Rs. 7,025 over the receipts in 1900 was due to the enhancement of the rates at which provisions were charged for and to a rise in the value of twist for manufacturing cloth. The principal items of expenditure included Rs. 38,946 on account of establishments and Rs. 36,815 on account of diet; Rs. 20,272 were remitted to the treasury. The average daily cost of diet for an ordinary native rose from Re. 0–2–1⅛ to Re. 0–2–5 in Madras and from Re. 0–1–3⅔ to Re. 0–1–5 in Vizagapatam and fell from Re. 0–1–10½ to Re. 0–1–9 in Calicut; the average daily cost of diet for a European and for a native in hospital in Madras increased from Re. 0–7–1 and Re. 0–3–11 to Re. 0–8–4½ and Re. 0–4–10 respectively. The total cost of each lunatic on all charges calculated on the average daily strength advanced in Madras and Vizagapatam from Rs. 173–6–11 and Rs. 81–15–11 to Rs. 186–11–10 and Rs. 83–4–4 respectively; in Calicut it declined from Rs. 108–11–9 to Rs. 103–11–1.

SANITATION. (1901.)

[*The sixth annual report of the Sanitary Board, the thirty-eighth annual report of the Sanitary Commissioner and the twelfth annual report of the Sanitary Engineer, Madras, 1901.*]

Water-supply.

50. The extension of the Trichinopoly water-works and the construction of the Vizagapatam and Cocanada water-works, which had been begun in 1900, were in progress during the year; a scheme for the supply of water to Ootacamund from the Tiger Hill reservoir was under execution. Plans and estimates were submitted by the Sanitary Engineer for proposed water-supplies at Negapatam, Tinnevelly and Palamcottah, Guntúr, Tiruvannámalai, Erode, Kumbakónam and Coonoor and for improvements in the water-supplies at Adóni, Kurnool, Dindigul, Madura and Trichinopoly; investigations were in progress at Calicut, Masulipatam, Saidapet, Kodaikánal, Giddalur, Ongole and Salem. The Sanitary Board examined and laid before Government nine schemes, the most important of which related to Kumbakónam (Rs. 4,05,120), Ongole (Rs. 1,20,000) and Erode (Rs. 1,03,000).

Drainage.

51. No drainage works were constructed during the year, but plans and estimates for the improvement of drainage in Kumbakónam were completed and submitted to Government by the Sanitary Board. Investigations regarding the drainage of Madura were in progress.

Miscellaneous.

52. The progress in sewage-farming, sewage-filtration and the employment of urban rubbish and night-soil and sewage-filtrates for agricultural purposes continued. When the expenditure involved was trivial, action was usually taken by district boards on the reports of District Medical and Sanitary Officers and much useful improvement resulted in regard to rural water-supplies, conservancy and in the sanitation of schools; no important works were undertaken by local boards. A project for the

improvements to the market at Ootacamund at a cost of Rs. 20,050 was sanctioned by Government. The Sanitary Board issued a few new type-designs and disseminated information regarding the extermination of rats by means of sulphur dioxide gas.

VACCINATION. (1901–1902.)

[*Report on Vaccination in the Madras Presidency for the year 1901–1902; Judicial and Administrative Statistics of British India, XVI—Vaccination, pages 303 to 312.*]

53. The staff comprised 62 deputy inspectors of vaccination, 688 vaccinators and 140 probationers; these figures and others given below differ slightly from those given in the report on vaccination as the staff employed in Bangalore and Secunderabad Cantonments has been excluded; the number of vaccinators was therefore 13 less than in 1900, but the number of probationers increased by 3. The number of primary vaccinations and revaccinations rose from 1,175,714 and 75,325 to 1,229,788 and 87,318; the increase was due partly to the fact that the people are abandoning the idea that vaccination is a means of infecting them with plague. The greatest advances were shown in Vizagapatam (16,657), Madura (11,336) and Coimbatore (10,214), but the numbers vaccinated fell in nine districts, the decrease being specially noticeable in Salem (7,872); the explanations offered were usually incompleteness of staff, insufficiency of lymph and the occasional supply of inert lymph. The number of successful vaccinations was 1,159,909. During the year 92 per cent. of primary and secondary vaccinations and 76 per cent. of the revaccinations were successful. The greatest success (98·4 per cent.) was obtained by the method known as calf-to-arm. The number of children under one year of age who should have been vaccinated is estimated to have been 1,275,000, but only 354,094 were successfully vaccinated; in municipalities alone the number of infants who should have been vaccinated is estimated at 57,500, but only 34,373 were vaccinated. The vaccination of infants was carried on satisfactorily in Bellary district only, where the number of successful cases is 21·9 per mille of the total population; in Malabar the corresponding proportion was 0·9 per mille and it was very low in six other districts. Thirteen deputy inspectors failed to verify 50 per cent. of the cases in their ranges; nine deputy inspectors verified over 75 per cent.

CHAPTER VII.

INSTRUCTION.

GENERAL SYSTEM OF PUBLIC INSTRUCTION.

General.

1. Public instruction is controlled by the Educational department of Government. The control which Government exercise over the University of Madras is very slight and consists chiefly in an annual audit of accounts and in the rule whereby all changes in the by-laws of the University have to receive the sanction of the Governor in council. Colleges may be affiliated to the University on compliance with certain regulations. Certain institutions are maintained and managed by Government directly; they include at present (1902), four colleges for general education and six colleges for special branches of education, 108 secondary schools, including technical and training schools, and 301 primary schools. Other institutions are aided by Government by grants in money for various purposes on prescribed conditions. Government, local boards and municipalities make free grants in aid of 490 and 11,125 schools of the secondary and primary grade respectively and in aid of 30 other institutions under private management. Local boards and municipalities maintain in addition three colleges, 154 secondary schools and 2,535 primary schools. Over these schools Government exercise considerable control through the annual budgets of the local bodies which, under the Acts applying to them, require the sanction of Government; the grants are made on the recommendation of the officers of the Educational department. The Government further hold annually public examinations (both general and technical) which are open to pupils of recognized schools, *i.e.*, schools which are managed in accordance with certain conditions laid down by Government. Candidates for employment in the public service must ordinarily have passed one of these examinations or an examination held by the University, the standard of general education required for the several appointments varying with their nature. The Government notify from time to time the text-books which may be used in aided and recognized institutions. Several scholarships are awarded annually by Government in recognized schools and colleges, some of them being primarily appropriated to female candidates or to candidates belonging to special classes whose education is backward. In order to maintain a supply of competent teachers, Government have established 36 training schools and two training colleges for teachers, grant stipends to a large number of the students therein and hold examinations on the results of which certificates are granted to those who are considered competent to teach; the staff of a recognized or aided school must include a certain proportion of teachers holding such certificates or having some equivalent professional qualifications. There are eleven training schools for masters and thirteen for mistresses under private (mission) management. Sex does not affect a candidate's eligibility to appear for the public and University examinations and women can obtain degrees on the same terms as men; girls may, as a rule, attend the elementary schools for boys, and there are also several elementary schools for girls only; three colleges for women are affiliated to the University. The education of backward and indigent classes is specially encouraged by the maintenance of schools and the grant of assistance in money to schools for such classes under private management at increased rates on compliance with easier conditions than those prescribed for ordinary schools. Technical education is promoted by the maintenance of and the grant of assistance to technical schools, by the maintenance of technical colleges affiliated to the University, by the inclusion of technical subjects among those to be offered by candidates in the primary and lower secondary examinations and by a direction that candidates in the upper secondary examination shall pass in two or three technical subjects and by the award of scholarships to be held in technical schools and colleges. In elementary schools the pupils are usually taught in their own vernacular languages; but English is the medium of instruction and examination in all high schools except

a few vernacular high schools for girls and in all colleges affiliated to the University. Physical education is encouraged in schools aided under the results-grant system by the award of grants for proficiency in drill with gymnastics or calisthenics; drill and gymnastics are practically compulsory in all recognized secondary schools. Two training schools for gymnastic instructors are maintained by Government in addition to those already mentioned. Teachers are enjoined to attend to the moral training of their pupils and the examinations for the higher grade teachers' certificates include questions on the cultivation of good habits and the formation of character. Religious instruction is not included in any of the prescribed courses of instruction but, with the exception of a conscience clause with reference to aided schools for Europeans, there is nothing in the Madras Educational Rules to prevent teachers in institutions under public management from imparting religious instruction out of the ordinary school hours and teachers in aided or recognized schools from imparting it at any time, provided that secular instruction is given for the prescribed number of hours. Some account of the present state of education in the Presidency and in the several districts will be found in paragraphs 26 to 29 of Chapter VI (Details of Census) and in the statistical table appended to it; apparently the elementary education of the masses has not kept pace with the growth of the population during the decade 1891 to 1901.

The Educational Department.

2. The head of the Educational department under Government is the Director of Public Instruction. The department is broadly divided into (*a*) the Superior service and (*b*) the Subordinate service. The former consists of two branches called the Indian Educational service and the Provincial Educational service. Nineteen posts to be filled by persons appointed in England or appointed in India with the approval of the Secretary of State are included in the Indian Educational service, and thirty-five posts to be filled by recruitment in India are included in the Provincial Educational service. The salaries of officers in the Provincial service vary from Rs. 200 to Rs. 700, while appointments in the Indian service generally carry a salary of Rs. 500 rising to Rs. 700 by annual increments of Rs. 50 during the probationary period of five years and afterwards a salary of Rs. 750 rising by annual increments of Rs. 50 to Rs. 1,000; personal allowances varying from Rs. 100 to Rs. 500 are also granted in certain cases.

The Supervising agency.

3. For the purpose of the education of boys the Presidency is divided into four circles, for that of girls into three circles, each of which is under an inspector or inspectress of schools. Two inspectors and the three inspectresses are members of the Indian service and the other two inspectors are members of the Provincial service. There is also an inspector of technical schools who inspects all technical schools throughout the Presidency. There are nine assistant inspectors of schools who are members of the Provincial service; each has charge of a division consisting of two or more districts. Under them are 53 sub-assistant inspectors; there are also five sub-assistant inspectors of Muhammadan and Mappilla schools, one sub-assistant inspector of Sanskrit schools and six sub-assistants to the inspectresses of girls' schools; the salaries of these officers range from Rs. 75 to Rs. 150. For the organization and periodical inspection of elementary schools 256 supervisors of schools work under the joint control of sub-assistant inspectors and presidents of local boards or chairmen of municipal councils as the case may be; all the supervisors except three are employed and paid by local boards or municipalities. Four superintendents of hill schools are employed in the Ganjám and Vizagapatam agency tracts. The distribution of work among the various inspecting officers and their several duties are laid down in the Madras Inspection Code.

The Textbook Committee.

4. The Text-book Committee has been appointed to take into consideration such books as may be submitted to it by the Director of Public Instruction and to advise Government in regard to their suitability as text-books for the several classes and forms in recognized schools, to advise the Educational department as to the steps to be taken for the preparation and publication of new text-books when necessary and to help in forming under the control of the Director of Public Instruction (i) an educational library containing copies of all text-books approved from time to time by the department, copies of text-books approved or prescribed in other provinces of India and in other countries and copies of works on the theory, the practice and the history of education and (ii) an educational museum containing plans and models of school buildings and specimens of maps, diagrams, apparatus

and appliances suitable for schools. The Committee consists of 20 members, who are appointed by Government, in addition to the Director of Public Instruction, who is ex-officio President. The Committee has power to appoint sub-committees to deal with different subjects and languages. The Committee submits annually to Government a list of books considered, with its recommendations. The Government publish annually lists of text-books (i) approved for use in institutions under public management and (ii) approved for use in recognized institutions under private management; the latter list is longer than the former in order to enable private managers to exercise a greater freedom of choice than that enjoyed by managers of schools maintained by Government, by local boards or by municipalities. Up to date the Committee has considered about 3,140 books, of which about 1,580 have been approved.

The classification of institutions.

Public and private institutions.

5. Educational institutions are classified independently in three ways. *Firstly*, they are classified as private institutions and public institutions. All indigenous schools which have not accepted the departmental standards of instruction and all others in which the course of instruction, however advanced, does not conform with the standards prescribed or accepted by the University or by the department and which do not submit to any public test are private institutions, *e.g.*, institutions in which only oriental classical languages or the Quran are taught. Public institutions include all other institutions whether under public management (*i.e.*, managed by Government, by local boards or by municipalities) or under private management; the latter may be either aided by Government, by local boards or by municipalities or unaided by grants in money by any of these bodies.

Recognized schools.

6. As regards schools not managed by Government, the classes more usually distinguished are "recognized" and "unrecognized" schools. The conditions of recognition will be found in the Madras Educational Rules. They deal with the general educational qualifications of the staff, the prohibition of managers, teachers and pupils from taking part in political agitation, the proportion of teachers to pupils, the accommodation and appliances, sanitary inspection, fees, the admission, promotion and withdrawal of pupils, discipline and registers. Special tracts of country may be exempted from their operation by Government and special classes of schools by the Director. Practically all unrecognized schools are included among private institutions and recognized schools among public institutions.

Primary schools, etc.

7. *Secondly*, public institutions are classified according to the nature of the highest instruction given in them, as primary schools (lower and upper), lower secondary or middle schools, upper secondary or high schools, special schools (of art, of law etc.), arts-colleges (second grade and first grade) affiliated to the University of Madras and professional colleges (of law, of medicine etc.) also affiliated to the University. A school usually contains two or more of the following classes or forms, infant class, first to fourth classes, first to sixth forms. Schools are denoted as lower primary, upper primary, lower secondary, or upper secondary according as they contain any class between the infant and the third class, the fourth class, any form between the first and the third forms or between the fourth and the sixth forms. In second-grade colleges the highest instruction is that required for the First examination in Arts, while in first-grade colleges, pupils are educated for the B.A. degree examination also. In each of the professional colleges instruction for the corresponding degree examination is given.

English and Vernacular schools.

8. *Lastly*, schools are further classified as English and Vernacular. English schools include all schools in which English is taught as a compulsory subject (*i.e.*, as the first language) and is used as the general medium of instruction either throughout the schools or in one or more of the higher classes or forms of primary or lower secondary schools. Other schools are Vernacular schools.

The Training of Teachers.

Teachers' certificates.

9. Examinations are held annually with a view to test the qualifications of the candidates to teach in schools and colleges. Certificates are granted on the results of these examinations. They are of two kinds: (1) "General Teachers' certificates" or briefly "Teachers' certificates," being certificates of ability to teach the subjects that ordinarily enter into the curricula of schools for general instruction and (2) "Technical Teachers' certificates" which are certificates of ability to teach in any one of the subjects included in the Government's technical examination scheme.

Teachers' certificates are of five grades: (1) Licentiate in Teaching, (2) second-grade collegiate, (3) upper secondary, (4) lower secondary and (5) primary. There are three grades of Technical Teachers' certificates, namely, (1) advanced, (2) intermediate and (3) elementary. In each grade certificates are divided into two classes—first and second—according to the number of marks obtained; in some cases the educational qualifications of the candidates are also considered in determining the class of his certificate. Examinations are held at several centres by the "Board of Examiners for Teachers' Certificates" for all certificates except the degree of Licentiate in Teaching, the examination for which is conducted by the University. No candidate is admitted to an examination unless he has passed certain prescribed examinations. Candidates for teachers' certificates, who have gone through the prescribed course at a recognized training institution, are called trained candidates and the certificates granted to them are called trained teachers' certificates; other candidates, who must have served as teachers in recognized schools for a period of not less than two years but have not undergone the course of training, are called untrained candidates and the certificates which they can obtain are designated untrained teachers' certificates. The examinations for both kinds of certificates of the same grade are identical, but the minima numbers of marks required to enable a candidate to qualify for an untrained teacher's certificate are lower than those required for a corresponding trained teacher's certificate. The examination for the teachers' certificates comprises, *firstly*, a written examination in organisation, discipline and teaching and, in the case of examinations for second-grade collegiate or upper secondary teachers' certificates, moral training; and, *secondly*, a practical test in teaching a class, reading and doing black-board exercises. The fees to be paid by candidates are Rs. 2, Rs. 4, Rs. 5 and Rs. 8 for the written examination, and Re. 1, Re. 1, Rs. 2 and Rs. 3 in the practical test in the primary grade, lower secondary grade, upper secondary grade and second-grade collegiate examinations respectively. No candidate is admitted to the test for a technical teacher's certificate unless he has passed the advanced, or the intermediate or the elementary technical examination, as the case may be, in the subject in which he desires to be tested, or an equivalent examination. The nature of the examination varies with the subject, but must include a practical test in teaching a class in the subject. The fees to be paid by candidates are Rs. 2, Rs. 4 and Rs. 6 in each subject in the elementary, intermediate and advanced grades respectively. The names of successful candidates are published in the *Fort St. George Gazette*.

Training institutions.

10. Training institutions are divided into five classes, viz., first-grade and second-grade training colleges, upper secondary, lower secondary and primary training schools, according to the grade of teachers' certificate for which the pupils are trained. Training schools are sometimes called normal schools, but this term is obsolete. In addition to the Teachers' College, Saidapet (para. 42) Government maintain at present two training colleges and 31 training schools for masters, five training schools for mistresses, and two for gymnastic instructors. There are in addition nine aided training schools for masters and 13 for mistresses. The local boards also maintain from time to time sessional schools, *i.e.*, schools held for short sessions varying from three to six months in the year by special supervisors of schools who move from place to place according to the convenience of teachers in the neighbourhood who have not passed the primary examination; their object is to prepare such teachers for the primary examination in order to qualify them for admission to primary training schools and not to give instruction in the theory and art of teaching. Students from Madras Presidency are admitted to the Government training institutions free, and those from elsewhere have to pay for a complete course a fee varying from Rs. 20 to Rs. 80 according to its grade. A course usually occupies two terms. The number of students is limited and they are selected annually from the candidates for admission. Stipends are granted by Government to some of the students at the rates of Rs. 5, Rs. 6, Rs. 10, Rs. 12 and Rs. 15, according to the department (primary etc.), in which the students are undergoing training, but these stipends can be increased in certain special cases; the numbers of Government stipendiaries are limited to 730, 390, 60, 44 and 33 in the primary, lower secondary, upper secondary, second-grade collegiate and first-grade collegiate departments respectively. Local boards also may grant stipends. A stipendiary employed under Government or a local board or a municipality may draw not more

than half the pay of his substantive appointment in addition to his stipend, while attending a training institution.

Standards in schools for general education.

11. Eight standards are recognized in schools for general education, namely, the infant standard corresponding to the infant class, the first to fourth standards corresponding to the first to fourth classes and the fifth to seventh standards corresponding to the first to third forms. The courses of instruction in each class or form and the number of marks assigned for each branch of every subject in the public examinations are detailed in the Madras Educational Rules. The principal school examinations are those known as the primary, lower secondary and upper secondary examinations, corresponding to the fourth and seventh standard and sixth form examinations respectively. These examinations are not open to pupils studying in "unrecognized" schools. They are under the control of the Commissioner for Government examinations (see paragraph 47) and full particulars regarding them will be found in the annual Calendar of the Commission.

The Primary Examination.

12. The primary examination is conducted by Boards of Examiners. Candidates are divided into two classes: (i) pupil candidates and (ii) private candidates. Pupil candidates include pupils who, during the six months (in the case of night schools, four months) preceding the examination, have been studying continuously in the fourth standard or class of a school for general education which has been registered for aid on the results-grant system and pupils of Government schools in Agency tracts; such candidates pay no fees for the examination, until they have passed, while the fee payable by a private candidate for admission is Rs. 2-8-0. A candidate who has already passed the examination pays a fee of Re. 1 for each additional optional subject offered. No candidate is considered to have passed unless he has obtained one-third of the full number of marks in each of the compulsory subjects and in each of two optional subjects; passed candidates, who obtain three-fifths of the full number of marks in each subject, are placed in the first class and others in the second class. The compulsory subjects are (1) reading, recitation and grammar in the first language (usually the pupils' own vernacular language), (2) writing and spelling, (3) arithmetic including fractions and mental arithmetic applied to simple bazaar transactions. There are ten ordinary optional subjects including agriculture (for boys only) and needle-work (for girls only); candidates who wish to qualify for the office of karnam must pass in mensuration; there are also 20 industrial subjects, any one or two of which may be offered by private candidates as optional subjects. The results of each examination are published in the District Gazette. Certificates are issued to successful private candidates free of charge and to successful pupil candidates on payment of Rs. 2-8-0 within one year from the date of publication of the results.

The Lower Secondary Examination.

13. The lower secondary examination includes four compulsory subjects—language, arithmetic, geography and history of India—and six optional subjects; any of the subjects of the elementary technical examination may also be offered as optional subjects. The fees for admission are Rs. 3 for all the compulsory subjects and Re. 1 for each optional subject. In order to pass the examination, a candidate must obtain 35 per cent. of the marks in the first language, 30 per cent. in arithmetic, 25 per cent. in geography and in history of India and 33 per cent. of the aggregate number of marks for all the compulsory subjects and must also pass in two optional subjects. To pass in an ordinary optional subject a candidate must obtain 33 per cent. of the full marks and to pass in any of the subjects of the elementary technical examination he must obtain the marks laid down in the syllabus. Passed candidates, who obtain not less than 60 per cent. of the aggregate number of marks for the compulsory and two optional subjects, are placed in the first class; others are placed in the second. The results are published in the *Fort St. George Gazette* and certificates are granted to successful candidates free.

The Upper Secondary Examination.

14. The four compulsory subjects of the upper secondary examination are English, second language (one of certain vernacular languages or Sanskrit, Arabic, Persian, Latin, French or German), mathematics (arithmetic, algebra including quadratic equations, and geometry including the first three books of Euclid), and history and geography; any of the subjects of the intermediate technical examination may be offered as optional subjects. Ordinarily candidates must pass in all the compulsory subjects and in two optional subjects, but the examination in an

additional optional subject may be passed by female students in lieu of algebra and geometry and by European candidates in lieu of the second language. Native candidates ignorant of English may bring up any of the vernacular languages mentioned as their first language instead of English. To pass in English a candidate must obtain 50 per cent. of the marks for hand-writing and of the marks for dictation and 40 per cent. of the marks for translation or advanced composition, and 40 per cent. of the aggregate marks; a candidate must obtain 35 per cent. of the marks in order to pass in each of the other subjects; he will not, however, be considered to have passed in the compulsory subjects unless he obtains 40 per cent. of the aggregate marks for all the compulsory subjects. The names of successful candidates are published in the *Fort St. George Gazette* and certificates are issued to them free. Successful candidates who obtain not less than 60 per cent. of the aggregate marks for all the subjects are arranged in the first class in order of merit and all others are placed in the second class in alphabetical order.

Government scholarships in schools for general education.

15. With a view to enable pupils of promise to prosecute their studies further, the Government award certain scholarships annually on the results of the public examinations. Particulars regarding them are published annually in the *Fort St. George Gazette*.

In Primary Standards.

16. One hundred and sixty scholarships of the monthly value of Re. 1 and 60 of the monthly value of Rs. 1½ are awarded on the results of the second and third standard examinations to Mappila pupils in the Ernad and Walavanad taluks in the Malabar district who pass for a grant under the results-grant system (see pages 229 and 230) and who are certified by the inspecting officers to have shown sufficient merit to deserve a scholarship. These scholarships are tenable for one year. The Mappillas are a class of Muhammadans; the more indigent among them are ignorant and fanatical and their education is specially desired on account of their tendency to organise religious riots which lead to much loss of life.

In Lower Secondary Forms.

17. One hundred and twenty scholarships, each tenable for three years and having a monthly value of Rs. 2, Rs. 2½ and Rs. 3 in the first, second and third years, respectively, and 60 special scholarships, each tenable for three years and having a monthly value of Re. 1, Rs. 1½ and Rs. 2 in the first, second and third years, respectively, are awarded annually on the results of the primary examination. Two of the ordinary scholarships are allotted to each district and others are appropriated to certain classes of pupils, but scholarships allotted to male pupils are awarded only to those whose pecuniary circumstances prevent them from prosecuting their studies without assistance. Fifteen of the special scholarships are intended for Muhammadans, 15 for Brahmans and 30 for non-Brahman caste Hindus. Scholarships not appropriated by the class to which they are allotted may be awarded to pupils of the other specified classes. Candidates must be not more than fourteen years of age if girls and not more than twelve years of age if boys.

In Upper Secondary Forms.

18. Seventy scholarships, each tenable for three years and having a monthly value of Rs. 4, Rs. 5 and Rs. 6 during the first, second and third years, respectively, are awarded annually on the results of the lower secondary examination. The allotment of these scholarships is similar to that of the ordinary scholarships awarded in lower secondary forms. The limits of the ages of candidates are seventeen years in the case of girls and fifteen years in the case of boys.

Standards in technical schools and examinations.

19. The courses of instruction in twenty subjects in industrial and art schools and classes are laid down in the Madras Educational Rules. In lower class technical schools, they are divided into four standards—A, B, C and D—of which standard A is the lowest. Higher class technical institutions include classes in which preparation for the elementary or elementary and intermediate or elementary, intermediate and advanced technical examinations is afforded and the courses of instruction are governed by the syllabuses for those examinations; they may also contain the lower standards, A, B, C and D. Other subjects, such as agriculture, drawing, sanitary science, book-keeping etc., are included among the subjects of instruction in schools for general education. Classes in which pupils are prepared for elementary, intermediate or advanced technical examinations are called respectively elementary technical, intermediate technical and advanced technical classes.

20. Technical examinations are held annually under the control of the Commissioner for Government Examinations in 96 subjects which are included under

21 heads, namely, civil engineering, mechanical engineering, electrical engineering, physical science, geology, biology, sanitary science, pharmacy, agriculture, veterinary science, commerce, music, drawing etc., jeweller's work, printing, book-binding and type-founding, wood-work and metal-work, leather-work, textile fabrics, glass and pottery, tailoring and dress-making, cookery. The examinations are of three grades, elementary, intermediate and advanced Any person who has completed in a recognized school or class the prescribed course in the subject or subjects in which he appears, and any employé under Government, a local board or a municipal council, who is required to pass in any of the subjects, may present himself for examination; any other person may appear for an elementary technical examination if he has passed the compulsory subjects of the lower secondary examination and for an intermediate or advanced examination if he has passed the compulsory subjects of the upper secondary examination or the matriculation examination. Other persons may be specially permitted to appear by the Commissioner. The fees to be paid for the examinations in each subject are Re. 1, Rs. 4 and Rs. 8 for the elementary, intermediate and advanced examinations respectively. The examinations are held at Madras and at various centres in the mufassal. Intermediate examinations are held in all subjects, but elementary and advanced examinations are held in certain subjects only. The syllabuses of the examinations are published in the *Fort St. George Gazette* and each syllabus is also published in the form of a pamphlet. Successful candidates are divided into two classes; their names are published in the *Fort St. George Gazette*, only those candidates who pass in the first class being arranged in order of merit. The numbers of marks required to pass in the second or first class are generally 35 or 40 or 45 per cent. and 60 or 65 or 70 per cent. of the full marks respectively; the examinations comprise written, oral and practical examinations or only one or two such branches of examination; if a practical examination is included in the test, a separate minimum number of marks has generally to be obtained in it. Certificates are granted to successful candidates; group-certificates are awarded to candidates who pass all the examinations included in one of sixteen specified groups. There are six other groups of a higher standard; for passing in all the subjects included in one of these a diploma is granted. Diplomas are granted in agriculture, veterinary science, electrical engineering, drawing and commerce. Chemists' and druggists' diplomas are awarded to candidates who pass the intermediate examinations in five prescribed subjects and serve satisfactorily for one year in the shop of an approved chemist and druggist.

Government scholarships in technical schools.

21. One hundred and eighty scholarships are awarded annually in recognized technical, industrial and art schools or classes; 60 have a monthly value of Re. 1 each and are tenable for one year in standard C in industries or in the fifth standard in drawing; 50 have a monthly value of Rs. $1\frac{1}{2}$ each and are tenable for one year in standard D in industries or in the sixth standard in drawing; 35, worth Rs. 2 a month each, are tenable for one year in elementary technical classes; 20 have a monthly value of Rs. 7 each and are tenable for two years in intermediate technical classes, and the remaining 15 are worth Rs. 10 a month each and are tenable in advanced technical classes. These scholarships are awarded on the results of the examination in the standard or class immediately below that in which they are to be held; no scholarships are awarded on the results of an examination in any subject in which there is no higher examination. Candidates must have been pupils for one year in a recognized technical, industrial or art school or class and must, at the time of examination, be under 22 years of age to compete for scholarships in the advanced technical classes, under 18 years of age to compete for scholarships in the intermediate technical classes and under 16 years of age in other cases. The scholarships can be held only in recognized technical, industrial or art schools or classes. Twenty special scholarships, having a monthly value of Rs. 2 each, are awarded annually to Mappillas attending a course in the special commercial class attached to the Government School of Commerce, Calicut; the course extends over a period of $14\frac{1}{2}$ months.

Grants-in-aid.

22. The Local Government exert considerable influence over education not only directly by the maintenance of institutions from Provincial funds and by the exercise of the extensive powers of control vested in them over local boards and municipal councils by the Acts relating to those bodies, but also indirectly by

making grants to local bodies and managers of institutions under private management on condition of compliance with certain regulations and of presentation of pupils for public examinations and by allowing local boards and municipal councils to make similar grants towards the cost of maintenance of primary and lower secondary schools on the recommendation of officers of the Educational department. If aid is sought on behalf of an institution, the conditions of recognition must be fulfilled unless the institution has been exempted from their operation. Text-books which are not included in the authorized list of text-books may not be used in aided institutions without the express sanction of Government. In schools for Europeans it may not be required as a condition of any pupil being admitted into or continuing in the school that he shall attend or abstain from attending any Sunday school or any place of religious worship; or that he shall attend any religious observance or any instruction in religious subjects in the school or elsewhere to which his parent or guardian objects; or that he shall, if his parent or guardian wishes to withdraw him, attend the school on any day exclusively set apart for religious observance by the religious body to which his parent or guardian belongs; the time or times during which any religious observance is practised or instruction in religious subjects is given at any meeting of such a school must be either at the beginning, or at the end of the meeting, or both; the Director has, however, power to exempt schools from the conditions mentioned in this clause. The whole income of an aided school must be devoted to educational purposes. Certain schools, known as poor schools, in which the majority of the pupils are poor or belong to certain backward and indigent classes or in which the pupils are Muhammadans or Mappilas, receive special treatment.

Grants for teaching.

23. Grants for teaching are given under three systems, viz., (i) the salary-grant system, (ii) the fixed grant system and (iii) the results-grant system. The aid given to colleges and high schools and certain other schools is on the salary-grant system. Salary-grants are usually calculated on the salaries actually paid by the manager, provided that such salaries appear to the Director to be reasonable, and, in institutions in which the teachers do not receive fixed salaries, on such salaries as the Director may consider appropriate. The grants may amount to sums not exceeding one-fourth, one-third, one-half or two-thirds of the salaries according to the qualifications of the teacher or supervisor for whom the grant is made. The total grant to any particular institution is further limited by the sum required to meet that part of the expenditure which is not covered by current receipts from fees etc. Conditions regarding the average daily attendance of pupils, the time devoted to teaching, the protection of teachers and pupils from small-pox and the ages of teachers must be complied with. The grants are payable monthly. Grants may be withheld, reduced or suspended in cases in which such frauds or irregularities as the falsification of registers etc. have been committed.

Salary-grants.

Fixed grants.

24. The aid given to lower secondary and primary schools admitted to the permanent section of the general school list and to certain special schools is on the fixed grant system. A list of schools admitted to aid and of schools excluded from aid on the fixed grant system is published annually by the Director. The amount of a fixed grant is determined for three years with reference to the actual cost of the school during the previous year; on first admission, however, the minimum amount of fixed grant to a school is not less than the average amount of the grants received by the manager under any other system during the previous three years; the fixed grant for any particular year is further limited to the net cost of the school for the year. Certain conditions regarding the average daily attendance of pupils, the number of school days, the qualifications of teachers, the protection of teachers and pupils from small-pox, the courses of instruction and the presentation of pupils for examination must be fulfilled. The annual grants are payable in two half-yearly instalments. A fixed grant can be withheld, reduced or suspended on account of deterioration, failure to remedy defects pointed out in writing, fraud or certain other similar reasons.

Results-grants.

25. Aid given to lower secondary and primary schools admitted to the temporary section of the general school list is on the results-grant system. Results-grants, though paid to the managers or teachers, are earned by the pupils on the results of the public examinations; they are of two classes: an "ordinary" grant is that earned by a pupil who obtains one-third of the maximum number of marks in each subject,

provided that the result of the class examination as a whole is "fair". To earn a "merit" grant the pupil had, till the year 1901–1902, to obtain three-fifths of the full marks in each subject, and the result of the class examination as a whole must be "good"; the words "fair" and "good" here indicate that, in the examining officer's opinion, if marks had been assigned, each member of the class would have obtained on an average one-third and three-fifths of the maximum respectively; but in the year 1902–1903 a new rule has been brought into force, under which a merit grant equal to 10 per cent. of the earnings is added to the earnings in the compulsory subjects and in each optional subject in which 75 per cent. of the pupils examined in the compulsory subjects and in the particular optional subject have passed. The grants are usually earned in accordance with a standard scale and vary from two annas, the ordinary grant which can be earned by an infant in the optional drill with gymnastics or calisthenics, to twelve rupees, the merit grant which can be earned by a pupil in the seventh standard (third form) in the compulsory subjects. Grants are however made at rates varying from 150 per cent. to 25 per cent. higher than those given in the standard scale for blind and deaf and dumb children, for pupils in schools for backward and indigent classes and in backward localities, for Muhammadan boys, for poor pupils in poor schools and for certain other special classes of pupils. The total amount of the results-grants payable to the manager of any particular school is limited to that part of the current expenditure which is not covered by fees etc. Conditions relating to the average daily attendance of pupils, to the number of school days, to the qualifications of teachers, to the protection of pupils from small-pox and to the ages of pupils must be complied with. Lists of schools admitted to aid and of those not admitted to aid are published annually by the Director. The grants are payable annually to the manager before the close of the official year for which they are made. If the total amount of the results-grants earned by pupils in schools aided on this system exceeds the budget allotment for the purpose, the funds available are divided proportionately among the schools according to the grants earned.

Miscellaneous grants.

26. Grants can also be made towards scholarships and stipends, to managers of training institutions, to students in technical schools, for European orphanages, for school buildings, for hostels or boarding-houses for students, for furniture, books and appliances required for schools, public libraries and reading-rooms, for needle-work or other art and industrial exhibitions and towards endowments and prizes. In many cases the amounts of grants which may be made depend on the sums contributed by managers of institutions or private persons. Full details regarding grants will be found in the Grant-in-aid Code which is published annually in the *Fort St. George Gazette*, as well as in the form of a book. The Government, however, reserve to themselves, the rules in the code notwithstanding, the right to withdraw or refuse any grant-in-aid at their discretion.

The University of Madras. *Act XXVII of 1857. Act XLVII of 1860.*

27. The University of Madras is constituted on the model of the University of London in all respects and is purely an examining body conferring degrees in arts (including teaching), law, medicine and engineering. It was incorporated in the year 1857 and the power of conferring degrees was granted in 1860. The Senate, which consists of a chancellor, a vice-chancellor and not less than thirty fellows, is divided into the four faculties corresponding to the degrees just mentioned, and has power, subject to the approval of Government, to make by-laws and regulations.

The Syndicate

The present number of fellows is about 200. The executive government of the University is vested in a syndicate consisting of the vice-chancellor and eight of the fellows, the faculty of arts being represented by five members and the other three faculties by one member each. The syndicate appoints examiners, regulates examinations, keeps the accounts and carries on the correspondence of the University with the aid of a Registrar who is an officer appointed once in five years by the syndicate, subject to the approval of the Senate, on a salary of Rs. 600 per mensem rising to Rs. 800 by annual increments of Rs. 50. The by-laws provide also for the appointment of an Assistant Registrar. The syndicate has power to recognize examinations of other Universities as equivalent to examinations held by the Madras University with a view to enable candidates to appear for the examinations of this University. There are fourteen boards of studies in the several branches of learning; no board consists of less than three or more than

The Boards of Studies.

twelve members; the latter are selected by the syndicate from the fellows and hold office for three years. The boards are empowered to submit for the consideration of the syndicate nominations of examiners and assistant examiners in their respective branches, to recommend the text-books from year to year, to recommend persons to edit selections from writings in vernacular languages to be prescribed for the matriculation examination, to consult specialists who are not fellows of the University, and to consider and report on all matters referred to them by the syndicate. Heads of affiliated colleges, members of the boards of studies and fellows of the University are competent to recommend persons to be appointed examiners, and the syndicate finally sanctions their appointment. Each of the boards of examiners suggests to the syndicate the names of such assistant examiners and chief assistant examiners as it considers to be specially qualified in its particular subject. The Examiners.

28. The power of conferring honorary degrees was granted in 1884. The honorary degree of Doctor in the Faculty of Law has been conferred on one gentleman, viz., the Hon'ble the Rev. William Miller, M.A., LL.D., D.D., C.I.E. Honorary degrees. *Act I of 1884*

29. In the faculty of arts five examinations are held, namely, the Matriculation, the First examination in Arts, and the examinations for the B.A., the M.A., and the L.T. degrees. Successful candidates in the first, second or last of these examinations are arranged in two classes, the names of those placed in the first class only being published in order of merit. Candidates who pass the B.A. or M.A. degree examination are arranged in three classes and in order of merit except in the third class in the list showing the results of the B.A. degree examination. A candidate for the Matriculation examination, who has not attended a recognized high school for two terms in the year before the examination, can appear only after the completion of the twentieth year of his age. To matriculate a candidate must obtain 40 per cent. of the full marks allotted to English and 35 per cent. of the marks allotted to each of the other three branches, mathematics, physics and chemistry, history and geography. Persons may appear for the First examination in Arts two years after they have matriculated, if they have meanwhile attended an affiliated college for four terms; otherwise they may appear for the examination four years after matriculation. The examination includes English and a second language (in each of which a candidate must obtain 35 per cent. of the allotted marks) and mathematics, physiology or physiography, history; a candidate must obtain 30 per cent. of the allotted marks in each of two of the last three branches. To obtain the degree of Bachelor of Arts, the candidate must, at any time after two years from the date on which he passed the First examination in Arts and after the completion of his twenty-fifth year, unless he has attended an affiliated college for four terms after passing the First examination in Arts, pass an examination in English, a second language and a branch of science. The five branches of science which are subjects for the examination are mathematics and natural philosophy, physical science, natural science, mental and moral science, history. A candidate must obtain one-third of the marks assigned to each of the language divisions and one-third of the marks allotted to the branch selected as well as one-fourth of the full marks in each sub-division of that branch. The examination for the M.A. degree includes six branches. Five correspond to the science branches for the B.A. degree examination and the sixth is language; to pass in branch II it is sufficient to pass in physics or chemistry and in branch III the candidate may qualify in botany or physiology or zoology or geology. To pass the examination the candidate must obtain 40 per cent. of the marks assigned to one branch and 30 per cent. of those allotted to each sub-division of the branch. Candidates are not admitted until two years after they have passed the examination for the B.A. or other accepted degree. The examination for the degree of Licentate in Teaching consists of a written examination in principles of education, in history of education and in method and school-management and a practical test of skill in the management of a class and in teaching; a candidate must obtain 35 per cent. of the marks assigned to each branch of the written examination and 40 per cent. of the total marks allotted to the examination and 40 per cent. of the full marks obtainable in the practical test. Ordinary degrees and examinations. Arts.

30. Candidates for the First examination in Law must have taken the B.A. or other accepted degree and have attended courses of lectures in the prescribed subjects Law.

at a recognized law college for two consecutive terms. The subjects of the examination are jurisprudence, Roman law, the law of contracts and the law of torts. Candidates must obtain one-third of the marks assigned to each subject and 40 per cent. of the aggregate number of marks. No candidate may appear for the B.L. degree examination until he has passed the First examination in Law and attended courses of lectures in the prescribed subjects at a recognized law college for two terms. Candidates are examined in the theory and law of property, Hindu and Muhammadan law, Indian constitutional law and criminal law. Those who fail to obtain one-third of the marks in each subject and 40 per cent. of the aggregate number of marks do not pass. Candidates for the degree of Master of Laws are not admitted to the examination until two years have elapsed from the date on which they passed the B.L. degree examination; they are examined in one of four branches and to pass the examination must obtain one-third of the marks assigned to each sub-division of the branch and 40 per cent. of the aggregate number of marks. Successful candidates in each of these three examinations are arranged in three classes in the order of proficiency.

Medicine.

31. The faculty of medicine hold examinations for the degrees of Licentiate in Medicine and Surgery, of Bachelor of Medicine and Master in Surgery and of Licentiate in Sanitary Science. The L.M. and S. degree examinations comprise the first, the second and the final examinations which must be passed successively. These examinations are partly written and partly oral and practical. Candidates must have attended the prescribed courses of instruction and practice in recognized institutions and hospitals. No candidate may appear for the first examination unless he has completed his nineteenth year and been engaged in medical studies for two years after passing the First examination in Arts. To pass the first examination candidates must obtain half the marks in anatomy and one-third of the marks in physiology and in chemistry and half the aggregate number of marks. The second examination comprises pathology, hygiene, medical jurisprudence, materia medica and therapeutics and practical pharmacy; and the final examination includes medicine, surgery, midwifery and ophthalmology; to pass either of these examinations candidates must obtain one-third of the marks in each subject as well as half the aggregate number of marks assigned in the examination. To obtain the M.B. and C.M. degree candidates must pass the first, the second, the third and the final M.B. and C.M. examinations in this order. The regulations governing these examinations are similar to those relating to the L.M. and S. degree examinations. A candidate may appear for the first examination after completing his eighteenth year. The subjects of the examinations are respectively chemistry, physics and biology; anatomy, physiology and chemistry; pathology, bacteriology, materia medica and therapeutics, hygiene and medical jurisprudence; medicine, surgery, midwifery and ophthalmology. Candidates for the degree of M.D. must have taken the degree of M.B. and C.M. or some equivalent degree. No examination is held but they are required to submit to the medical faculty a thesis or dissertation treating of any branch of medicine, surgery, midwifery or sanitary science which they may have made the special subject of study since passing the M.B. and C.M. or other accepted examination. Candidates must produce certificates to show that they have been engaged in the practice of their profession for two years if they have taken the B.A. degree, and for three years if they have not. Persons who have passed the M.B. and C.M. or L.M. and S. degree examination or an equivalent examination may appear for the L.S.Sc. degree examination if they have attended the prescribed courses of lectures. The subjects of examination include physics, chemistry, sanitary law, vital statistics, pathology, hygiene, sanitation, sanitary engineering, drawing and mensuration; candidates must also write a report on the sanitary conditions of some actual locality. Candidates must obtain one-third of the marks in each subject and half the aggregate number of marks. Successful candidates are arranged alphabetically in two classes. Previous to the institution of the University medical diplomas were conferred by the Medical College.

Engineering.

32. The only examinations in the faculty of engineering are the First examination in Engineering and the examination for the degree of Bachelor of Engineering. Candidates who appear for these examinations must have passed the First examination in Arts and the First examination in Engineering respectively. They must

have undergone certain courses of instruction. The subjects of the first examination are mathematics, science and drawing. There are two branches for the B.E. degree examination, the civil branch and the mechanical branch. The subjects comprised in these branches are respectively mathematics, civil engineering and building, estimating and topographical drawing; and mathematics, mechanical engineering and machine drawing and estimating. To pass either of these examinations candidates must obtain one-third of the marks in each subject and half the aggregate number of marks assigned in the examination or branch. Successful candidates are arranged in order of proficiency.

Graduates.

33. Up to the 31st March 1902, 163 graduates had proceeded to the degree of Master of Arts; the number on the rolls at present is 139, of whom no less than 97 are Brahmans, 23 non-Brahman Hindus, 6 Native Christians, 8 Europeans and 2 Muhammadans. Three women have taken the M.A. degree, two of them being Native Christians and one a European. Of the twelve Masters of Laws on the rolls eight are Brahmans; and of 1,202 Bachelors of Laws 867 are Brahmans and only eight are Muhammadans. Out of 6,380 Bachelors of Arts 5,172 are Brahmans and 54 are Muhammadans. Again among 74 Bachelors of Engineering 52 are Brahmans, and there is not a single Muhammadan; of 307 Licentiates in Teaching 194 are Brahmans.

Income.

34. Fees ranging from Rs. 6 to Rs. 100 each are levied from the candidates for the various examinations held by the University. There are also other sources of income, such as exemption certificate and convocation fees etc. These cover the whole cost of the University and leave a surplus; the balance in favour of the University on the 1st April 1902 amounted to nearly Rs. 4,60,000. The University also administers several endowments, instituted for the encouragement of learning such as awards in the shape of scholarships, prizes and medals.

Colleges affiliated to the University.

35. Educational institutions or departments of such institutions may be affiliated to the University in arts, law, medicine or engineering. The advantages of affiliation include the right to enter students for the corresponding University examinations and the recognition by the authorities of certificates of attendance at lectures by the principals and members of the staff of the institution. The rules of affiliation include conditions regarding returns and registers, the admission of students, inspection and the number of working days. The privilege of affiliation may be withdrawn from an institution which has ceased to fulfil the conditions of affiliation or to present candidates for examination for a period of three successive years. The principals and professors of affiliated colleges managed by Government are generally members of the Indian Educational service.

The Arts Colleges.

36. Arts-colleges are of two grades: pupils in second-grade colleges are prepared for the First examination in Arts, but not for the examination for the B.A. degree; in first-grade colleges the necessary instruction for the latter examination is also given. The Government maintain four arts-colleges, namely, the Presidency College at Madras and the colleges at Kumbakónam, Rajahmundry and Mangalore. The first three of these are first-grade institutions and the fourth is second-grade. Local boards maintain three second-grade colleges. Seven first-grade colleges, twenty second-grade colleges for men and three second-grade colleges for women are aided. There are three unaided colleges, of which one is first-grade. The majority of the colleges, not under public management, are connected with Christian Missions, the most important of them being the Christian College at Madras.

Scholarships.

37. Twenty-five scholarships are awarded annually by Government on the results of the matriculation examination to candidates who are of not more than eighteen years of age if males and twenty years of age if females; they are tenable for two years and have a monthly value of Rs. 7 each. Six are reserved for female students; of the others, two are intended for Uriyas, two for Mappilas, six for other Muhammadans, four for students belonging to backward and indigent classes, and five are open to other classes; scholarships allotted to male students are awarded only to persons who are unable to prosecute their studies without assistance; the scholars must read for the First examination in Arts in an approved college. If a scholar obtains a place in the first class in the First examination in Arts, the value of the scholarship is raised to Rs. 10 a month and continued for two years to enable him to proceed to the B.A. degree examination; if a scholar

obtains a place in the second class only, the scholarship is continued on similar conditions at the same rate of Rs. 7 a month. Eight scholarships, tenable for two years and worth Rs. 10 a month each, are awarded annually on the results of the First examination in Arts to enable students of promise to prosecute their studies as far as the B.A. degree examination. The ages of candidates must not exceed twenty years in the case of men and twenty-two years in the case of women. The claims of female candidates are preferred to those of male candidates. Other conditions similar to those which apply to scholarships held in classes for the First examination in Arts apply to these scholarships. Information regarding them is published annually in the *Fort St. George Gazette*.

The Law College.

38. The Law College, Madras, is at present the only educational institution in the Presidency which affords facilities for the study of law. It was opened in 1891 as it was found that the law classes formerly attached to the Presidency College were unwieldy and the course of instruction was inadequate. The principal aim of the college is the improvement of instruction in the theory of law; practically it is intended to afford instruction to students preparing for the various examinations in law. The college moved into its present habitation in 1899. It is affiliated to the Madras University. The rules regulating its constitution and working are sanctioned by the Local Government. The staff consists of a principal, who is also the senior professor, a junior professor and not less than two assistant professors. The general management of the college is vested in a council subject to the general control of the Director of Public Instruction; the council consists of two or more judges of the High Court, the principal, the junior professor and such other members as may be appointed by Government; the executive management of the college is vested in the Principal who is independent of the council in all matters of discipline. The college contains three kinds of classes: (i) B.L. classes, (ii) Pleadership classes and (iii) special classes for students attending the college but not preparing for the B.L. degree and Pleadership examinations. The fees for attending the B.L. classes are Rs. 75 a term during the first year and Rs. 100 a term during the second year; those for attending the Pleadership classes are Rs. 50 a term; and those for attending the special classes are Rs. 12 a term for each subject, the minimum fee being Rs. 20 a term. Fees are levied at half rates from Muhammadans and Uriyas. There are two terms a year. The Morehead scholarship, which is worth Rs. 17-8-0 per mensem and is tenable for one year, is awarded annually to the student of the Law College who stands highest in the list of successful candidates at the First examination in Law held at the end of his second term of study. Two college scholarships, each worth Rs. 100 a term (Rs. 200 per annum) and tenable for one year, are awarded annually in the B.L. class on the results of the First examination in Law. One of these scholarships must be awarded to a Muhammadan or Uriya and the other to a student who is not a Muhammadan or Uriya. Lending and consulting libraries are attached to the college. A calendar is published annually.

The Medical College.

39. A medical school was established by Government in 1835; in 1851 the school became a college. The control of the college was transferred in 1855 from the Medical Board to the Director of Public Instruction and in 1857 the college was affiliated to the University of Madras. Buildings for the accommodation of the college have been erected and extended from time to time. The government of the college is now vested in the Principal, aided by a consultative council composed of all the professors and of any other members who may be appointed by Government, subject to the general control of the Director of Public Instruction. The staff consists of a principal, thirteen professors, four lecturers, eight assistant professors and a gymnastic instructor. The college contains five departments, viz.: (i) the College department, in which students are educated for the M.B. and C.M. and the L.M. and S. degrees; (ii) the Apothecary's department, consisting only of military pupils, admitted by competitive examination to qualify as Military Assistant Surgeons, and of female pupils; (iii) the Hospital Assistant department; (iv) the Chemist and Druggist department; and (v) the Sanitary Inspector's department. The fees payable for the full course, extending over five years, for the M.B. and C.M. degree amount to Rs. 610 if paid annually and Rs. 500 if paid at the beginning of the course; those for the L.M. and S. degree course, which extends over four years, amount to Rs. 470 if paid annually and Rs. 400 if paid at the

commencement of the course. The fees for a course of three years in the Hospital Assistant department amount to Rs. 87, in addition to a fee of Rs. 15 for registration to appear at the final examination. Rs. 10 is the fee for each course in the Chemist and Druggist department and an additional fee of Rs. 25 is levied for admission to the final examination. The fee for a course in the Sanitary Inspector's department is Rs. 30. Casual students who wish to attend special courses of lectures are admitted on payment of a fee of Rs. 30 for an autumn and Rs. 20 for a spring course. Female pupils attending the college pay no fees except a registration fee of Rs. 5 for each session; but those holding scholarships paid from the Countess of Dufferin Fund are exempted from the payment of this registration fee. Attendance at the lectures given in the Medical College is recognized in Great Britain as partial qualification for degrees and diplomas granted in that country. In order to place the training of Hospital Assistants on an improved and extended basis, orders have been recently issued to discontinue the training of Hospital Assistants in the Medical College, to reopen the Medical School at Rāyapuram and to establish a new school at Vizagapatam. The scholarships, medals and prizes awarded to pupils of the college are too numerous to be detailed here; information regarding them can be obtained from the calendar of the Medical College, which is published annually. Museums, a library and a gymnasium are attached to the college. Pupils have also the advantage of attending classes held in the General Hospital, the Government Ophthalmic Hospital, the Government Maternity Hospital, the Native Infirmary and the Lunatic Asylum.

The College of Agriculture.

40. The College of Agriculture is situated at Saidapet, about 5 miles from Madras. It is intended to afford instruction to persons who desire to become acquainted with the theory and practice of agriculture, more especially that of South India, as well as to students preparing for examination in the subjects prescribed for the diploma in agriculture in the Government technical examination scheme. The responsibility for the discipline and management of the college is vested in the Principal, under the control of the Director of Public Instruction, the Director of Agriculture being consulted on all important matters connected with its management. The staff consists of a principal, a vice-principal and five assistants; the Agricultural Chemist to the Government of India and the Superintendent, Civil Veterinary Department, Madras, deliver courses of lectures to the students in the third year's class at certain times, but the visits of the Agricultural Chemist to the Government of India will be discontinued after the delivery of the next annual course. The full course of instruction extends over three years. A museum, two laboratories, a veterinary hospital, a botanical garden and a farm are attached to the college. The fees are Rs. 30 a session for the full course and Rs. 10 a session for a single subject; the fees paid by Muhammadans and members of backward and indigent classes are levied at half these rates. Seven district scholarships and two special scholarships, each worth Rs. 10 per mensem in the first year, Rs. 12-8-0 per mensem in the second year and Rs. 15 per mensem in the third year and tenable for thirty-four months, are awarded annually. The district scholars are nominated by the Collectors of districts in rotation. The special scholarships are awarded by the Director on the recommendation of the Principal; they are intended for Muhammadans and for members of backward and indigent classes. An abstract from the rules relating to the institution and working of the college is published in the *Fort St. George Gazette* in April in each year.

The College of Engineering.

41. Established originally in the year 1794 as a Survey School, the institution was developed into a Civil Engineering College in 1857. It was reorganised in 1886 as a College of Engineering. It was affiliated to the Madras University in 1877. The college affords theoretical and practical instruction in subjects, a knowledge of which is necessary to fit persons for employment as engineers, surveyors and draftsmen. The responsibility for the discipline and management of the college is vested in the Principal, under the control of the Director of Public Instruction. The full staff consists of a principal, three professors, three instructors and eight assistants. There are also a workshop instructor and an instructor in gymnastics. The college contains four classes, viz.: (i) the Engineer class, (ii) the Engineer Subordinate class, (iii) the Sub-Overseer and Surveyor class and (iv) the Draftsman class. Admissions to these classes are regulated by competitive examinations held at several centres. Five military students are admitted annually on the results of a competitive examination. The courses of instruction in these four classes extend

over four, three and-a-half, two and two years respectively. Casual students are also admitted to the Engineer class. Students in the higher course of engineering are prepared for the B.E. degree examination of the Madras University. The monthly fees for attending the classes are Rs. 12, Rs. 6, Rs. 5 and Rs. 4 respectively, but the fees are reduced if paid in advance for the term or course. The fees for the entrance and final examinations range from Rs. 10 to Rs. 20. Students in the Engineer class are given subsistence allowances of Rs. 50 per mensem in the case of Europeans and Eurasians and Rs. 25 per mensem in the case of natives during the year of practical training. Similar allowances are granted to students in the Engineer Subordinate class, but their values are Rs. 30 and Rs. 20 per mensem respectively. In each class three scholarships are awarded annually on the results of the entrance examination, their monthly values being Rs. 15, Rs. 10, Rs. 8 and Rs. 7 respectively; one of these scholarships in each class should be awarded annually to a Muhammadan, or a Native Christian or a European or Eurasian. The scholarships are renewable on the results of the examinations held at the end of each term. The Walker scholarship, which is worth about Rs. 13 per mensem, is tenable for two and-a-half years in the Engineer Subordinate class by a native of Malabar, South Canara or the Nilgiri district. One mechanical engineer student is permitted each year to join the Madras Railway Company's locomotive shops at Perambúr; half the premium (Rs. 500) is defrayed by the Educational department, the other half being paid by the student; the premium is for a course of two years. Four stipends of the monthly value of Rs. 6 for the first year, Rs. 7 for the second year and Rs. 8 for the third year are awarded annually to persons to be trained as teachers in technical or industrial schools. Prizes and medals are awarded on the results of the college examinations. On his successful completion of a course in either of the first two classes, a student is granted a diploma; a student who completes successfully a course in either of the last two classes is granted a certificate. Persons holding such diplomas and certificates have prior claims to certain appointments in the Public Works department and under local boards. Extracts from the Code of Rules are published annually in the first issue of the *Fort St. George Gazette* in January; the rules are also contained in the calendar of the College of Engineering which is published annually.

The Teachers' College, Saidapet.

42. This institution, established as the Government Normal School in 1856, was converted into a college and affiliated to the University in 1886. The staff consists of a principal, a vice-principal, six senior assistants, a drawing-master, a gymnastic instructor and a number of junior assistants. The college is open to candidates who have passed the matriculation or any higher examination of the University of Madras and who are employed in schools in the Madras Presidency. Students from native states are also admitted on payment of the following rates of fees for the full course of two terms, viz., graduates, Rs. 80; under-graduates who have passed the First examination in Arts, Rs. 60; matriculates, Rs. 40. The students receive stipends from Government ranging from Rs. 10 to Rs. 20 per mensem, according to their University qualifications. Graduate students are prepared for the L.T. degree examination of the Madras University and other students for the departmental teacher's certificate examination. Instruction is also given to the students in drill, drawing and agriculture and they appear for public examinations in these subjects. A practising school of the upper secondary standard is attached to the college; the strength of the school is over 400; the classes are chiefly taught by normal students under supervision. The college has a library containing 5,800 volumes and an educational museum with 350 specimens. Connected with the college are a Teachers' Association, of which all the students are members, and a Popular Science Club, which arranges for lectures on scientific subjects by specialists. A hostel consisting of three sections, one for Smartha Brahmans, one for Vaishnava Brahmans and one for Christian students is attached to the college. The Teachers' College has four branch institutions, one (at Saidapet) for training gymnastic instructors for schools throughout the Presidency, one a Hindu training school (at Saidapet) for training lower secondary and primary grade teachers for the Madras and Chingleput districts and for the Wesleyan Missions throughout the Presidency, one (at Madras) for training lower secondary and primary grade Muhammadan teachers, and one (at Madras) for training Panchama primary school teachers. Each of these institutions has a practising school attached to it with about a hundred pupils. These schools are

visited every week by the principal, the vice-principal and the senior assistants in rotation. A calendar of the Teachers' College is published annually.

The School of Arts.

43. The Madras School of Arts was established in 1850. It is divided into four departments. In the art-department instruction is given in drawing, painting, designing, modelling and engraving. The second and third departments are the metal-work and wood-work departments. Instruction in cotton and carpet-weaving is given in the textile-fabrics department. There is no entrance examination or entrance fee. The monthly fees in the art-department vary from As. 8 to Rs. 3. Boys joining the industrial class may be admitted as probationary apprentices for one year and afterwards enrolled as apprentices for five years, during which period they receive stipends at the rates of Rs. 3, 4, 5, 7 and 10 per mensem in each successive year.

The Lawrence Asylum.

44. About the beginning of the year 1856 Sir Henry Lawrence, K.C.B., offered a donation of Rs. 5,000 and a subscription of Rs. 1,000 a year, so long as he might be in India, for the establishment at some hill station in this Presidency of an institution on the lines of the Lawrence Asylums at Sanawár and at Mount Abu for the benefit of soldiers of the British army who were serving or had served in Madras. The Lawrence Asylum was accordingly established in August 1858 on the "Stonehouse" property at Ootacamund with the aid of the foundation money and of subscriptions raised in the Army and in England. It was amalgamated with the Madras Military Male Orphan Asylum in 1871 on the completion of the new buildings at Lovedale near Ootacamund. Though the asylum does not belong to Government, it is largely controlled by Government which have sanctioned a code of rules relating to its management and constitution and furnish it with a fixed annual grant-in-aid amounting to Rs. 48,000. The institution consists of a male and a female branch, the maximum strength of each branch being 300 and 65 respectively. It is intended for European and Eurasian children, especially orphan children of military officers and soldiers; its objects are to secure for them a healthy and invigorating climate, to remove them from objectionable surroundings, to afford them secular and religious education and to train them to earn their livelihood. Children labouring under any form of disease, mental or physical, which is likely to incapacitate them for the ordinary duties of life and, except with the special sanction of the Committee, the children of soldiers who have been dismissed the service by sentence of court-martial are not admitted. The management of the asylum is vested in a Committee, consisting of the Brigadier-General Commanding the Southern District as *ex-officio* chairman, the Collector of the Nilgiris as *ex-officio* vice-chairman, the Assistant Adjutant General, the Assistant Quartermaster General, the Senior Medical Officer at Ootacamund and the Commandant of the Depot at Wellington as official members and three non-official members resident at Ootacamund and elected by the Committee; the Principal is ordinarily the secretary of the Committee. The Lieutenant-General Commanding the Forces in Madras and the Bishop of Madras are *ex-officio* patrons and visitors of the institution. Two members of the Committee must visit it every month and the Committee elect six ladies resident in Ootacamund, two of whom must visit the female branch every month. The staff consists of a principal, a headmaster in the male branch, a headmistress in the female branch and several assistant teachers in each branch. Instruction in literary subjects is given in the male branch as far as the standard of the upper secondary examination and in the female branch as far as that of the lower secondary examination; instruction is also given in technical subjects including shorthand, typewriting and telegraphy and special classes may be held for pupils preparing for the medical and railway examinations. The instruction in religion includes the exposition of the main truths of Christianity without allusion to controverted points of faith or practice; at the time when religious instruction is given in school, clergymen of the Church of Rome or ministers of the Church of Scotland or other Presbyterian Church or of a Non-conformist body may, on giving previous notice to the Principal, attend and give instruction to the children of their respective communions. The children of soldiers of the rank of corporal or private or of pensioners who are drawing only the pay of those ranks are admitted free, but fees have generally to be paid for children whose fathers or step-fathers hold higher rank and for the children of civilians, not being orphans and destitute. One scholarship is awarded annually to a boy who has passed the lower secondary

examination in the first class; it is worth Rs. 15 per mensem and is tenable for three years in an approved recognized school while he is studying for the matriculation examination; if he passes that examination the scholarship is increased to Rs. 20 per mensem tenable for two years to enable him to study for the First examination in Arts; if he passes that examination and undertakes to study for the B.A. degree examination in an approved college, the scholarship is continued for two years at a value of Rs. 25 a month for the first year and Rs. 30 a month for the second year. Two scholarships, each of the value of Rs. 15 per mensem and tenable for two or more years, are awarded annually to boys who show an aptitude for any particular trade or industry to enable them to learn it in some approved firm or institution. A stipend, worth Rs. 20 a month and tenable for one year, is awarded annually to a girl who has passed the lower secondary examination with credit with a view to her being trained as a schoolmistress in an approved training school.

The Lawrence Asylum Press.

45. The press which is now known as the Lawrence Asylum Press was established in 1790 as an adjunct to the Military Male Orphan Asylum. The principal press is at Madras but a branch press was established at Ootacamund in 1884, chiefly for the purpose of printing the orders of the Army Head-quarters. The press is conducted on commercial principles and its earnings are derived mainly from work done for the public; the profits are given to the Lawrence Asylum.

The Public Service Examinations.

46. The system of public service examinations which has grown up in this Presidency owes its origin to the views expressed by the Court of Directors of the East India Company in their despatch of the 19th July 1854, which, while authorizing the Government of India to establish a liberal system of education throughout India, approved of the institution of examinations for testing the fitness of candidates for employment in various offices under Government. All appointments in the public service, except such as are reserved or are specially exempted from the operation of the examination rules are divided into two great classes: (1) appointments in the "superior" service carrying salaries of less than Rs. 15 per mensem and all appointments in the "inferior" service except such as are menial in their character and (2) appointments in the "superior" service carrying salaries of Rs. 15 per mensem and upwards. The lowest general test prescribed for admission to the former is the primary examination; and the lowest test for admission to the latter is the upper secondary examination, or the University matriculation examination supplemented by a test in hand-writing and dictation. In addition to these general tests, persons in the public service have to pass certain special tests before they can hold some of the higher appointments; these tests include précis-writing, translation, accounts, civil judicial, criminal judicial, revenue, sea customs, and jail tests and six tests for officers of the Salt, Abkári and Separate Revenue department. Although the higher appointments are not expressly closed to persons who have passed general tests in addition to those already mentioned, yet by and through the operation of the rules regulating the special tests some of the higher appointments have come to be restricted to persons of higher educational attainments than those represented by the lowest qualification for employment. Thus, there is no rule which directly declares that none but candidates who have passed at least the First examination in Arts held by the Madras University shall be appointed Tahsildars or Inspectors of Police, but only persons who have passed the First examination in Arts are admitted to the criminal judicial tests prescribed for those appointments. Similarly no person who is not a graduate can ordinarily expect to become a Deputy Collector, as none but graduates are, as a rule, permitted to appear for the revenue test, higher grade, which is one of the special tests prescribed for the office of Deputy Collector. Except for such restrictions regarding general educational qualifications the examinations are open to all candidates; they are not competitive but the selection of persons for certain appointments is restricted to persons who have passed the prescribed tests.

The Commissioner for Government Examinations.

47. For the conduct of examinations held by Government, the Commissionership for the Uncovenanted Civil Service examinations, or the Commissionership for Government examinations, as the office is now called, was instituted in 1860. It was at first entrusted to the Director of Public Instruction, but was subsequently held for many years by a Member of the Board of Revenue. Since 1880, however,

it has been held by the Director of Public Instruction. The correspondence of the Commissioner is carried on by a Secretary. The examiners for the several examinations under his control are appointed by the Commissioner and are paid out of the fees realized from the candidates. Most of the examinations prescribed for entry into the various departments of the public service are conducted by the Commissioner besides others for the promotion of general and technical education. The following is a list of the examinations at present under his control :—

(1) The primary examination.
(2) The lower secondary examination.
(3) The upper secondary examination.
(4) The Government technical examinations.
(5) An examination of under-graduates in handwriting and dictation.
(6) An examination of candidates for the grade of Civil Medical Pupil.
(7) An examination of candidates for the grade of Native Military Hospital Assistant.
(8) An examination of candidates for the grade of Military Assistant Surgeon.
(9) An examination of candidates for the grade of Madras-Burma Hospital Assistant.
(10) The special test examinations, chiefly revenue and judicial.
(11) The special tests for officers of the Salt, Abkári and Separate Revenue department.
(12) The competitive examination for entry into the Salt, Abkári and Separate Revenue department.

All the above examinations are held at a very large number of centres in the Presidency, and in certain native States also under certain conditions.

The Board of Examiners.

48. With a view to ensuring the acquisition of the requisite knowledge of languages, law, codes etc. by the officers of the several departments, the Government have prescribed certain examinations to be passed by them in the earlier stages of their careers and have offered rewards to officers who pass more advanced examinations in languages. To conduct these examinations a Board of Examiners has been constituted. The present Board consists of a president who is usually a member of the Board of Revenue, certain *ex-officio* members and a varying number of special members appointed by Government from time to time. The Accountant General, the Inspector General of Police, the Superintendent of Survey, the Conservator of Forests, Central Circle, the Chief Presidency Magistrate, the Chemical Examiner to Government, the Registrar of the High Court and the Translators to Government are *ex-officio* members of the Board. The officers who are examined by the Board include members of the Indian Civil Service, Police officers, Cantonment Magistrates, Forest officers, officers in the Provincial Civil Service, and European and Eurasian officers of the Educational department. Military officers including commissioned medical officers who are District Medical and Sanitary officers are examined in the vernacular languages. Officers of the Madras, South Indian and Southern Mahratta Railway Companies and of the Bank of Madras are also examined in the vernacular languages. The examinations are usually held at Madras, but some may be held simultaneously at other stations.

The Pleadership Examination.

49. The pleadership examination was instituted in 1879 for the purpose of ascertaining the qualifications of persons desirous of becoming pleaders in courts subordinate to the High Court, with reference to the rules framed by the High Court under section 6 of the Legal Practitioners' Act (XIII of 1879). The Examination Board consists of a Judge of the High Court, the Advocate General, the Government Pleader, the Principal of the Law College, Madras, and a High Court vakil, with the Deputy Registrar of the High Court, Appellate side, as member and secretary. The examination is held annually during January or February at Madras. The High Court, from time to time, prescribes subjects of examination and determines the general qualifications and the standard of proficiency required for each grade of certificates. Examiners are appointed by Government on the recommendation of the Examination Board to conduct each examination.

EDUCATION. (1901-1902.)

Conference.

50. Among the events of the year that which must be reckoned of the highest importance is the institution of the conference which sat at Simla under the presidency of the Viceroy towards the close of 1901. Questions connected with all branches of general education were discussed, and, so far as this Presidency is concerned, the practical result of the deliberations of the conference, as embodied in the resolutions of the Government of India upon them, will embrace the following improvements:—(i) the establishment of Government model primary schools in localities where education is in a neglected or backward condition, and the development of the industrial and the agricultural sides of primary education; (ii) the improvement of female education by the establishment of Government girls' schools and the provincialising of those now under the management of local boards; (iii) the revision of the curricula for primary schools for boys and girls and the adoption of suitable text-books; (iv) the strengthening of the inspecting agency, both male and female, by the appointment of additional Assistant Inspectors and Sub-Assistants, and of Assistant Inspectresses, as well as by the appointment of an Inspector of training and European schools; (v) the remodelling of training schools so that with a more extended course the students who pass out from them may be equipped not only with a knowledge of the methods and art of teaching, but also with what is of greater or at least of equal importance, a higher general culture than they usually possess at present; (vi) a reduction in the number of public examinations and their adjustment to the conditions both of general education and of employment in the public service; and (vii) the establishment of separate scholarships for Europeans in institutions for general and professional education similar to those now enjoyed by some other classes of the community. Concurrently with the discussion of questions affecting general education by the body of Directors at the Simla Conference the consideration of matters relating to technical and University education was entrusted to special Commisions appointed for the purpose and the reports submitted to the Government of India by these bodies are still under consideration.

Institutions.

Public and private institutions.

51. During the year public institutions declined in number from 21,215 to 20,792, and rose in strength from 731,207 to 740,628. Private institutions fell in number from 5,711 to 5,699 and rose in strength from 119,017 to 121,013. Though the increase in scholars is indicative of progress, the rate of extension in education appears to be diminishing. This diminution in recent years is partly accounted for by the prevalence of famine and epidemics and the pressure of financial exigencies, and partly by the more stringent application of the rules of recognition which has on the one hand prevented adventure schools from springing into existence and led to the closing of inefficient institutions, and on the other strengthened and consolidated schools of ensured permanence and recognised efficiency, as is shown by the increase in the number of scholars notwithstanding the fall in institutions. In three of the six groups of districts, there was, during the year, a decrease both in schools and scholars, and of the rest, the Southern and West Coast groups showed an increase both in schools and scholars, while the Northern group showed a decrease in schools and an increase in scholars. The largest advance in schools was made by Madura and in scholars by Malabar, while the greatest decline in scholars was shown by North Arcot and in schools by Ganjám.

Institutions according to standards.

52. There were, on the 31st March 1902, 3,779 students reading in 40 arts-colleges, while in the previous year 3,279 students read in 41 such institutions. Professional colleges rose in strength from 636 to 728. Taking public and private institutions together, upper secondary schools for boys rose during the year by four in number and by 1,199 in strength. Lower secondary schools for boys had 5,299 more scholars than in 1896-97, while primary schools for boys had a decrease of 387 schools and an increase of 9,379 scholars during the year. The numbers, respectively, in the collegiate, upper secondary, lower secondary, upper primary, and lower primary stages in public institutions were 3,779, 19,253, 40,183, 52,863, and 618,683 in 1901-1902 and 3,279, 17,849, 39,079, 49,480, and 615,345 in the previous year. Of those in the lower primary stage 550,670 were reading printed books and 68,013 were not. Of the scholars on the 31st March 1902, 5 per cent. were in the collegiate stage, 2·6 per cent. in the upper secondary, 5·5 per cent. in

the lower secondary, 7·2 per cent. in the upper primary and the remaining 84·2 per cent. in the lower primary. Thus only 15·8 per cent. of the entire number were beyond the lower primary stage.

Institutions according to managing agencies.

53. Of the whole number of institutions, 3,112 with 166,880 pupils were under public management, and 23,379 with 694,761 pupils under private management. Government and board schools numbered 419 and 2,692 with 25,673 and 141,045 pupils respectively; and the remaining institution with 162 pupils was under the native State of Sandur. Institutions under private management comprised 11,645 aided schools with 429,802 pupils, 6,035 unaided with a total strength of 143,946, and 5,699 indigenous and private schools with a nominal roll of 121,013 pupils. During the year Government schools rose in number by one in consequence of the inclusion of the Reformatory school, Chingleput, under special schools.

Scholars.

54. The percentage of male scholars alone in public institutions to the male population of school-age rose from 21·7 to 21·8, but the corresponding percentage for female scholars remained the same as in the previous year, viz., 4·0. Scholars are divided according to wealth into three classes: those who belong to a family with an income of Rs. 5,000 a year or more are considered to belong to the richer classes; if the income of the family is between Rs. 200 and Rs. 5,000, the pupils are in the middle class; and if the income is below Rs. 200 a year the pupils are in the poorer class. In all institutions the numbers in the three classes were 7,219, 164,844 and 689,569 or 0·8, 19·1 and 80·1 per cent. of the whole. In 1900–1901 the corresponding numbers were 7,656, 162,295 and 680,273. The number of scholars in the richer classes decreased, while those in the middle and the poorer classes increased. Taking public institutions only, the male pupils of the richer, middle and poorer classes were, in the collegiate stage (arts), 3·4, 73·9 and 22·7 per cent. respectively of the whole; in the upper secondary stage the proportions were 3·4, 60·8 and 35·8 per cent.; in the lower secondary stage 2·4, 48·1 and 49·5 per cent.; and in the primary stage, 0·6, 15·6 and 83·8 per cent. For female pupils in public institutions the proportions were 26, 63, 11 per cent. in colleges; 8, 70, 22 per cent. in upper secondary classes; 3, 42, 55 per cent. in lower secondary classes; and 1, 20, 79 per cent. in primary classes.

Parents or guardians.

55. The next classification of scholars is according to the occupation of their parents or guardians. Eight classes are given, viz., (1) officials, (2) petty officials, (3) traders, (4) landholders, (5) artisans, (6) coolies, (7) mendicants, and (8) others. About 43 per cent. belong to the land-holding class, 22 per cent. to coolies, 13 per cent. to traders, 12 per cent. to officials and petty officials, and 7 per cent. to artisans, the remaining 3 per cent. being either mendicants or "others." In the collegiate and upper secondary stages of public institutions over 90 per cent. of the male pupils belong to the land-holding, trading or official classes, there being of course very few artisans, coolies or mendicants in these stages. About 5 per cent. belong to the class of "others" which includes all the professional classes who are not officials.

Languages studied.

56. Out of 622,681 boys and 117,947 girls reading in public institutions, 123,287 of the former and 11,547 of the latter were reading English, while in 1900–1901 125,885 out of 614,949 boys and 12,307 out of 116,258 girls were reading English. In private institutions the number of boys reading English rose from 197 to 226 and that of girls from two to ten. Notwithstanding an increase in the total number of male and female scholars there has been a fall in the corresponding number reading English in public institutions. This fall was due chiefly to the abolition of English as an optional subject in standards below the third. The total number studying classical languages (among which French is included) was 68,689. Arabic was as usual read by the largest number, viz., 53,866. Of these 40,135 were boys and 13,731 girls, showing during the year an increase of 2,395 boys and 1,579 girls. The number reading Arabic is largely swollen by the Quran schools in most of which there is very little real study of the language. Next comes Sanskrit which was learnt by 12,187 boys and 211 girls or 81 more in the former case and 22 less in the latter than in 1900–1901. The number studying French fell from six in 1900–1901 to five in the case of boys, but rose from 418 to 421 in the case of girls.

Protection from small-pox.

57. The number of male and female pupils unprotected from small-pox fell from 15,461 and 3,779 respectively at the beginning of the year to 13,338 and 3,447 at its close.

Education in municipal and non-municipal areas.

58. On the 31st March 1902 there were 2,913 schools with 197,796 scholars in municipal areas and 23,578 schools with 663, 845 scholars in non-municipal, while the corresponding figures on the 31st March 1901 were 2,863, 190,741, 24,066 and 659,483, respectively. Of the total number of schools and scholars 11·0 and 23·0 per cent. respectively belonged to municipal towns, while in 1900–1901 these percentages were 10·6 and 22·4. The percentages of male and female scholars in all municipalities to the respective population of school-age during the last two years were 83·7 and 21·6, 86·9 and 22·8, respectively. There were 16 municipalities in which the percentage exceeded 100 which would imply that all children of school-age were at school. The reason given for the occurrence of such cases is that the ordinary estimate of the population of school-age as 15 per cent. of the total population is much below the truth and that a better estimate would be about 22 per cent.

Financial. General.

59. The total expenditure for the year on education, direct and indirect, from all sources including the figures relating to such of the indigenous and private institutions as furnished returns amounted to Rs. 79,32,188, and was Rs. 4,95,102 more than in the previous year. The amounts spent from local and municipal funds fell from Rs. 7,69,484 and Rs. 2,55,904 to Rs. 7,58,228 and Rs. 2,51,954 respectively and those paid from provincial revenues and from other sources rose from Rs. 18,79,734 and Rs. 21,41,960 to Rs. 21,24,402 and Rs. 22,84,029 respectively. The fees rose from Rs. 23,90,004 to Rs. 25,13,575. The total direct expenditure on education during the year was Rs. 58,67,743 or nearly Rs. 1,72,000 more than in the previous year. The total indirect expenditure for the year was Rs. 20,64,445 or nearly Rs. 3,23,000 more than in 1900–1901. If surplus fees and the expenditure on indigenous and private schools be left out of account, the expenditure will be found to be Rs. 76,61,012, while it was Rs. 71,76,850 in 1900–1901. Of the former sum, 8·23 per cent. was spent on arts colleges, 3·20 on professional colleges, 57·97 on general schools, 7·19 on special schools, and 23·41 per cent. on general or indirect charges, the corresponding figures for 1900–1901 being 9·01, 3·43, 59·80, 7·13 and 20·63 respectively. Nearly 58 per cent. of the total expenditure appertained to secondary and primary education. The percentage of the expenditure met from provincial, local and municipal funds, from fees and from private funds, respectively, was 27·83, 9·96, 3·36, 30·60, and 28·25, against 26·19, 10·79, 3·68, 31·13 and 28·21 in the previous year. It will be seen that there was a decrease in the proportion of the expenditure met from public funds. The amounts spent on Government, board and aided institutions together from provincial, local and municipal funds were Rs. 12,98,232, Rs. 6,60,650 and Rs. 2,17,883, respectively, while they were Rs. 13,17,314, Rs. 6,21,799 and Rs. 2,19,109 in 1900–1901. The expenditure by local boards on their own institutions will drop further in future owing to the transfer during the current year of a number of girls' schools from board to departmental management and a similar transfer proposed in the case of some of the board primary schools for boys. It is intended, however, that the funds thus set free should be devoted to increasing the results-grants to aided schools under private management.

Provincial charges and receipts.

60. Including, as usual, the figures relating to the college and school departments of the Medical College, but excluding those relating to the Lawrence Asylum, Ootacamund, the total provincial charges and receipts rose from Rs. 20,98,872 and Rs. 2,72,700 in 1900–1901 to Rs. 23,53,150 and Rs. 2,83,859. The budget grant for the year under 'Education' was Rs. 18,38,000. Eliminating from it the sum of Rs. 3,300 resumed by Government out of the provision for the pay of the third Inspectress of Girls' schools, and adding to it the sum of Rs. 300 transferred from the grant under 'Medical' towards the pay of the hospital assistant attached to the Reformatory School, Chingleput, the altered grant of Rs. 18,35,000 for the year is arrived at. The actuals of the year amounted to Rs. 18,26,349, or Rs. 8,651 less than the altered grant. The expenditure proper of the department during the year was Rs. 19,23,350, which is arrived at by deducting from the gross expenditure of Rs. 23,53,150, the sum of Rs. 1,65,834 spent on the Medical College which is not debited to 'Education,' and also the sum of Rs. 2,63,966 spent by the Public Works department on Government educational buildings out of the funds at its disposal. The Accountant General's final statement gives the total expenditure on education and on stationery and printing and adjusting heads as Rs. 19,22,966. If

to this sum are added Rs. 192, the bonus stated in the last report to have been wrongly paid from provincial funds in 1900–1901 to certain board salary-results schools in South Canara and credited to provincial funds during the year under report, and also a like sum, made up of two sums of Rs. 96 each paid in 1898–99 and 1899–1900, respectively, on account of the Prince of Wales' Sanskrit scholarship held in the Kallikóta College, Berhampur, and erroneously debited to 'Education, scholarships, colleges general,' instead of 'Trust Interest Fund,' but credited in 1901–1902 to provincial funds, the figure in the departmental returns is arrived at. Of the net provincial expenditure of Rs. 20,69,291, Rs. 98,054 represent the net cost of the Medical College including stipends, and Rs. 2,63,966, the outlay on Government educational buildings incurred by the Public Works department which includes Rs. 1,50,000, the price paid for the Umdah Bagh purchased for the Government Madrasa-i-Azam, and Rs. 25,516, the outlay incurred during the year on the new building in the old college premises constructed for the Madras Literary Society. The net expenditure proper of the department was thus reduced to Rs. 17,07,271, which is the same as the Accountant General's figure less Rs. 2,450, which was the interest on the Mangalore College and Hobart Training school endowments, credited by the Accountant General to a different major head.

Local and Municipal Funds.

61. Schools under the management of local boards rose in number from 2,367 to 2,376 and in strength from 115,213 to 118,068, but the expenditure from local funds on education fell from Rs. 7,74,688 to Rs. 7,62,702. The number of institutions under the management of municipal bodies fell from 318 to 316, but their strength rose from 22,590 to 22,977. The expenditure on education from municipal funds fell from Rs. 2,63,999 to Rs. 2,57,816.

Distribution of direct expenditure among the different classes of institutions.

62. Distributing the direct expenditure on education during the year among the different classes of institutions, it is observed that Government institutions excluding the Lawrence Asylum, Ootacamund, cost Rs. 9,64,539, board institutions Rs. 9,28,573, institutions in native States Rs. 1,217, aided institutions Rs. 33,90,628 and unaided institutions Rs. 4,83,313. Compared with the previous year more was spent on institutions of every class except Government institutions. The expenditure from provincial, local and municipal funds on secondary and primary schools for boys and girls during the year amounted to Rs. 6,33,821, Rs. 5,54,657 and Rs. 1,98,499 respectively, while in 1900–1901 the amounts spent were Rs. 5,89,069, Rs. 5,59,738 and Rs. 1,96,515, provincial and municipal funds showing an increase and local funds a decrease during the year under report. The total expenditure from public funds on the secondary education of boys fell from Rs. 2,02,735 in 1900–1901 to Rs. 1,88,319, but the expenditure on the primary education of boys rose from Rs. 9,06,367 to Rs. 9,43,703. The proportion of expenditure on the primary education of boys to the total expenditure on secondary and primary schools for boys rose from 81·7 per cent. to 83·4 per cent.

Average cost.

63. The average cost of education per head of population rose from As. 3–1 to As. 3–3, and the cost to public funds from As. 1–2 to As. 1–3. The percentage of expenditure met from public funds was 39·5.

School fees.

64. There was an increase in the total average numbers on the rolls of all classes of institutions from 815,688 in 1900–1901 to 830,833 and consequently a rise in the income from fees from Rs. 21,07,098 to Rs. 22,25,231 or by Rs. 1,18,133, the corresponding increase in the previous year being Rs. 78,229. The fees collected in Government, board and aided institutions of all grades for the general education of boys amounted to Rs. 84,173, Rs. 3,59,504 and Rs. 11,63,520, while in 1900–1901 they amounted to Rs. 81,088, Rs. 3,46,023 and Rs. 11,08,044, the increase being shared by all classes of institutions. In first-grade aided colleges for men the average number of students rose from 1,399 in 1900–1901 to 1,480 and the revenue from fees from Rs. 99,980 to Rs. 1,04,217, while in second-grade aided colleges the average number of students and the income from fees fell, respectively, from 753 to 662, and from Rs. 40,510 to Rs. 40,407.

Proportion of fee income to total expenditure.

65. There was, as in the previous year, a rise in the percentage of expenditure met from fees in arts and professional colleges and in upper and lower secondary schools for boys; in upper secondary schools for girls, the percentage declined; and in all other cases it remained the same as in the previous year. The proportion of the total cost met from fees in all classes and grades of institutions rose from 35

to 36 per cent. In Government, board and aided institutions, 17, 39 and 37 per cent. of the charges were met from fees, the percentages in the previous year being 15, 38 and 37.

Scholarships.

66. No changes were made in the Government scholarship notification published in February 1902 except that printed forms of application were prescribed both for new and renewed scholarships. The total expenditure on scholarships from public funds rose from Rs. 69,012 in 1900–1901 to Rs. 72,519 during the year, the expenditure from private funds in the same years being Rs. 25,625 and Rs. 25,785.

Grants-in-aid.

67. The grants-in-aid paid during the year from provincial and local funds rose from Rs. 6,27,756 and Rs. 2,34,200 in 1900–1901 to Rs. 6,85,243 and Rs. 2,37,275 respectively, and those paid from municipal funds fell from Rs. 1,17,380 to Rs. 1,17,143.

Fixed grant system.

68. On the 31st March 1902, the fixed grant system completed the third year of its existence. This system finds favour with managers of schools inasmuch as it relieves them of the worry of annual grant examinations and the uncertainty as to the amount of grant payable to them each year. Furthermore it has tended to increase the efficiency of schools inasmuch as only schools that have completely satisfied the conditions of recognition and worked their way into the permanent section of the general school list are admitted to aid on this system. The number of schools that received aid on this system during the year was 1,860 for boys and 289 for girls, while the corresponding numbers were 1,962 and 264 in the previous year, the decrease in the former case being due to the fact that a number of schools originally admitted to the fixed grant list had to be subsequently transferred to the results-grant list, as they were found ineligible for continuance in the permanent section of the general school list. The amounts of fixed grants assigned during the year from provincial, local and municipal funds were Rs. 1,48,180, Rs. 33,060 and Rs. 53,360 respectively, and in the previous year were Rs. 1,47,580, Rs. 33,910 and Rs. 53,450.

Results-grant system.

69. The number of schools registered for aid on the results-grant system during the year fell from 15,112 for boys and 633 for girls to 14,158 and 531, the decrease in both cases being presumably due to the strict enforcement of the rules of recognition and the inadequacy of aid given. The numbers of boys' schools and girls' schools examined for results-grants declined from 12,569 and 511 to 12,026 and 459. The total earnings of boys' schools from public funds rose from Rs. 6,57,600 to Rs. 6,69,622 and those of girls' schools fell from Rs. 55,027 to Rs. 47,212, while the sanctioned assignment was Rs. 3,23,351 for boys' schools and Rs. 31,235 for girls' schools, the corresponding figures for the previous year being Rs. 2,87,902 and Rs. 26,253. The increase in the earnings of boys' schools, notwithstanding the decrease in the number of such schools examined for results grants, is noteworthy. The rates at which results-grants were paid from the respective funds for every rupee earned varied in each district. In the case of provincial funds, the rates had generally increased both in regard to boys' and girls' schools, for in the former case the rates ranged from As. 4–3 in Madras to As. 12–8 in North Arcot, whereas in the previous year they ranged from As. 1–5 in Tinnevelly to As. 9–10 in North Arcot, and in the latter case the minimum rate during the year was As. 8–6, while it was As. 3–6 in 1900–1901. In the case of local funds the lowest rates were paid, as in the two previous years, in Malabar at As. 2 per rupee earned, and the highest rate was As. 11–1 in South Arcot. The lowest rate in the case of municipal funds, viz., As. 4, was paid in Malabar, and the highest rate, viz., As. 13–7, in Tanjore.

Controlling Agencies.

70. The number of circles (4) and divisions (9) was the same as at the beginning of the year, but the number of ranges was increased from 51 to 53 in January 1902. For girls' schools there are now three circles each under an inspectress, the third circle having been created in February 1902; these circles are divided into six sub-assistants' ranges, two for each circle. Inspectors examined on the whole 508 institutions, including 29 colleges, 114 upper secondary schools, 57 lower secondary schools, 267 primary schools and 41 special schools. In the Northern and Central circles 138 institutions were examined by Inspectresses of girls' schools during the year, and in the Southern and Western, 131. The average number of schools examined by Assistant Inspectors for grants fell from 198 to 181, and the number

Inspectors.

Inspectresses.

Assistant Inspectors.

of pupils examined from 9,069 to 8,834, while the corresponding figures relating to schools examined for improvement were 62 and 2,859 in 1901–1902 and 57, and 2,936 in the previous year. The average number of schools examined for grant by the Sub-Assistant Inspectors of boys' schools fell from 261 to 244, and the number of days spent on circuit from 207 to 205, while there was an advance from 39 to 41 in the average number of schools examined for improvement. For the examinations for the Sub-Assistants' test held in April 1900 and 1901, 15 and 12 candidates presented themselves, of whom 14 and 4, respectively, passed. Of the six girls' ranges two were under female and four under male Sub-Assistants. On an average each Sub-Assistant of girls' schools examined 154 schools and spent 193 days on circuit, against 167 schools and 195 days in the previous year. The Sub-Assistant Inspector of Sanskrit schools who commenced his first tour of inspection in the previous year and visited 14 districts, completed it during the year under report, examining two schools for grant and 43 for improvement and spending 87 days on circuit, the rest of his time being devoted to work in the Director's office. He was also in charge of the Government Oriental Manuscripts Library for three months during the year. Sub-Assistant Inspectors.

71. Three supervisors of primary schools were paid from provincial funds—one directly and two through the district board, Malabar—,54 from municipal and 199 from local funds. Twenty-four of them were employed for schools intended for Muhammadans or Mappillas. Of the whole number, 166, or nine more than in the previous year, were trained men, but as many as 72 were men of inferior qualifications, having passed only the lower secondary or the primary examination, and two were unpassed men. These officers visited 3,292 villages without schools, started 1,991 new schools and brought 1,928 unaided schools to the aided list and 2,394 private schools under inspection. The superintendents of hill schools visited 189 villages without schools, started 17 new schools, and brought 11 unaided schools to the aided list and 20 private schools under inspection. Supervisors.

72. The total expenditure from public funds on direction and inspection during 1901–1902 was Rs. 4,75,162 and in 1900–1901 was Rs. 4,68,811. The proportion of the above expenditure to the total expenditure from public funds on public instruction, surplus fee receipts in institutions under public management being deducted, was 15·2 per cent. during 1901–1902 and 16·1 per cent. in the previous year. Cost.

73. The revised matriculation by-laws, which at the close of 1900–1901 were under the consideration of Government, received their sanction during the year under report, the more important changes being the inclusion under history of an elementary knowledge of the present system of administration in British India and the constitution of physics, chemistry, history and geography into one group or division, a separate qualifying minimum not being required as before for physics and chemistry. The University. By-laws.

74. At the convocation held in March 1902, 661 candidates were admitted to degrees against 532 in the previous year, the figure being the largest for the past quinquennium. Degrees.

75. At the M.A. degree examination of 1902, 22 candidates were examined—the smallest number for the past six years—of whom ten passed. In the English language division of the examination for the B.A. degree, 917 candidates were examined, of whom 488, including one woman, were successful; the percentage of success for the Presidency rose from 41·4 in 1900–1901 to 53·2. The percentage of candidates who passed the second language division rose from 80·6 to 82·4; for this division comprising eleven languages, 626 candidates appeared, of whom 516 passed, both the female candidates who went up having come out successful; among the individual languages, Sanskrit had the lowest percentage, viz., 73·8. In the science division the percentage of success rose from 51·5 to 54·8; during the year under report, 449 candidates passed out of 819 examined; 420 appeared for mathematics, physical science, or natural science and 399 for philosophy or history against 363 and 402, respectively, in the previous year. The number of candidates that appeared for all the three divisions of the B.A. degree examination together was 391, of whom 182 passed. Of 692 candidates who had already passed a portion of the examination and now appeared for a Arts.

part or the whole of the remaining portion, 267 completed the test. Thus 449 qualified for the degree during the year, while only 336 qualified during 1900–1901. At the First examination in Arts, the percentages of candidates who passed in 1900–1901 and 1901–1902 were 41·6 and 38·6 respectively; during the year 1901–1902, 1,892 candidates appeared and 730 passed, the corresponding figures for the previous year being 2,089 and 868; 24 female candidates went up, of whom 12 passed.

Law. 76. There were no entrants for the M.L. degree examination of 1902. For the B.L. degree examination of 1902, 382 candidates appeared, of whom 179 passed. The percentages of success during 1900–1901 and 1901–1902 were respectively 42·6 and 46·9. At the First examination in Law held during the year under report, 280 candidates presented themselves and 158 or 56·4 per cent. passed, against 55·7 per cent. in the previous year.

Medicine. 77. For the First L.M. & S. examination 18 candidates appeared, of whom 13 passed, while at the second and final L.M. & S. examinations all the nine that went up failed. Out of 35 candidates that went up for the First M.B. and C.M. examination 16 passed; six appeared for the third M.B. and C.M. examination, and all failed. There were 15 candidates for the second M.B. and C.M. examination under the old rules and 14 under the new, and of these, 9 and 11 respectively passed. For the various examinations together there were thus 97 candidates, of whom 49 or 51 per cent. passed, the percentage for the year 1900–1901 being 50·5.

Engineering. 78. At the degree examination in Engineering 20 candidates have been successful during the past five years out of 37 that went up, and at the First examination in Engineering 44 have passed out of 77 that presented themselves. For the degree examination in Engineering held in 1902, 13 candidates appeared, of whom three or about 23 per cent. passed, while in the previous year 75 per cent. of the candidates passed. The percentage of passes at the First examination in Engineering rose from 59 to 76. The percentage of success secured during the year under report was the lowest for the past quinquennium in the case of the degree examination, but the highest in the case of the First examination in Engineering.

Teaching. 79. At the examinations for the L.T. degree during the past year, 53 and 51 candidates passed out of 74 and 114 examined on the written and practical sides, respectively. Of the 196 candidates who passed the practical test, 134 were Brahmans, 34 Native Christians, 22 non-Brahman Hindus and 6 Europeans and Eurasians. There were again no Muhammadans on the list. For the written and practical tests of the second-grade collegiate teachers' test examinations conducted by the board of examiners for teachers' certificates, 352 and 183 candidates appeared during the above period, of whom 150 and 144, respectively, were successful.

Matriculation examination. 80. The number of candidates who went up for the matriculation examination rose during the year from 7,313 to 7,658 and the number of passes from 1,423 to 2,427. Out of the 6,527 pupils who were in the sixth form on the 31st March 1901, 2,004 or 31 per cent. were kept back from the matriculation examination, while 27 per cent. were kept back in the previous year. The greater strictness in the selection of candidates for the examination, which this fact indicates, must partly at least account for the general improvement in the results of the examination, the percentage of success having risen from 19·5 to 31·7 during the year. Government and board schools presented 108 and 576 candidates, respectively, of whom 54 and 231 passed; while from aided schools 3,130 or more than two-thirds of the total number of pupil candidates appeared and 1,196 passed. Unaided schools sent up 709 and passed 254. The number of Government schools is too small to afford any comparison of much value, but they passed the highest percentage, viz., 50. Viewed by subjects, the largest proportion of success was as usual in the second language, while the lowest was in mathematics. In English it rose from 47 per cent. to 62 per cent. Of the successful candidates, 1,648 were Brahmans, 489 non-Brahman Hindus, 190 Native Christians, 50 Muhammadans, 47 Europeans and Eurasians and 3 others.

Cost. 81. The balance to the credit of the University on the 31st March 1901 was Rs. 4,23,734 and this had increased on the 31st March 1902 to Rs. 4,59,694.

Arts Colleges. Number and strength.

82. The number of first-grade colleges remained the same as at the beginning of the year, viz., 11, and these were attended by 26 M.A. students, 1,172 B.A. students, and 1,324 pupils studying for the First examination in Arts. Three of the colleges were under Government, one was under native and six were under mission management, while the remaining institution was an unaided one maintained by the Maharajah of Vizianagram. Of the 26 M.A. students, 15 were attached to the Presidency College and 11 to the Madras Christian College. There were 29 second-grade colleges with 1,257 students on the 31st March 1902; one—the Town College, Cuddalore—was reduced to a high school during the year under report. Only one of the second-grade colleges was maintained by Government, while three were under municipal, seventeen under mission and eight under native management. Two were unaided colleges and three were intended for women and had ten students on the rolls. The total number of pupils studying for the First examination in Arts in the first and second-grade colleges together was 2,581 in 1901-1902 and 2,051 in the previous year; this increase is explained by the comparatively high percentage of success in the matriculation examination of 1901, when it was 31·7, while it was 19·5 in the previous year.

Students for B.A. degree.

83. The number of students in the literary branches of the science division of the examination for the B.A. degree—history and mental and moral science—fell from 577 in the previous year to 551, while the number in the non-literary subjects, viz. mathematics and physical and natural sciences, rose from 544 to 558. Taking the senior B.A. class, the percentage of the number of students on the non-literary side to the total number fell during the year under report from 49 to 48, while in the junior B.A. class the percentage rose from 48 to 53. The number of students in the two classes together reading mathematics remained the same, while there was an increase under physical science, natural science having lost three students. Of the 1,172 B.A. students on the 31st March 1902, Tanjore as usual contributed the largest number, viz., 224, and 87 students came from Tinnevelly. There were 114 students from native States four less than in the previous year.

Scholarships.

84. Six M.A. scholarships of Rs. 20 each were offered and were all awarded, two in mathematics, one in physics, one in chemistry, one in zoology and one in geology, five being tenable in the Presidency College and one in the Madras Christian College. The recipients were all Hindus. Eight B.A. scholarships of Rs. 10 each were offered but only three were awarded, two to Muhammadans and one to a member of the backward classes, the surplus having been utilised in awarding extra scholarships for pupils studying for the First examination in Arts, of which 32 were given, the value of each scholarship being Rs. 7. Seven of the recipients were females (three Europeans and Eurasians and four Native Christians), three were Uriyas, nine Muhammadans, four Mappillas and four members of the backward classes, while the remaining five were Brahmans. Grants amounting to Rs. 2,171 were paid from provincial funds towards scholarships for persons studying for the examination for the B.A. degree and for the First examination in Arts. The total expenditure on scholarships in arts colleges was Rs. 25,266, of which provincial funds met Rs. 12,089, against Rs. 25,505 and Rs. 12,498 respectively in the previous year.

Expenditure.

85. The total amounts expended on arts colleges during the years 1900-1901 and 1901-1902 were Rs. 6,46,333 and Rs. 6,30,660, while the amounts paid from provincial funds were Rs. 2,61,823 and Rs. 2,39,541.

The Presidency College. (1901.)

86. The numbers of students on the rolls of the Presidency College during the first and second terms of 1901 were 398 and 403, while in 1900 the corresponding numbers were 349 and 356 respectively. There was a considerable increase in the strength of the two junior classes and a decrease in that of the senior F.A. class. Of 424 students who attended the college during the year 326 were Brahmans and 65 were classified as non-Brahman caste Hindus; the parents or guardians of 178 were officials and those of 135 were landholders; of the students 344 belonged to the middle classes. All districts were represented among the students except Anantapur and the Nilgiris. The percentages of the successful candidates among those who went up from the college for the English language division, the second language division and the science division of the B.A. degree examination were,

respectively 78·5, 78·1 and 80·8; 38·3 per cent. of the candidates for the First examination in Arts were successful. The receipts from fees, etc., were Rs. 35,639; the charges amounted to Rs. 1,22,882; the net cost of each student was reduced from Rs. 333 to Rs. 230.

The Law College. (1901.)

87. The number of students on the rolls of the Law College rose from 260 on the 31st December 1900 to 299 on the 31st December 1901; the strength of the senior B.L. class increased from 44 to 105 and that of the Pleadership class from 23 to 43. Of 42 students who appeared for the B.L. degree examination 30 passed, the percentage of successful candidates being 71, whereas it was 52 in 1900. During the year 78 students appeared for the First examination in Law and 55 of them passed. Only ten students appeared for the Pleadership examination; one passed in the first grade and five in the second grade. The receipts of the college amounted to Rs. 37,765 and the expenditure to Rs. 37,027; the net result was a profit of Rs. 738, while in 1900 there was a deficit of Rs. 10,243. The sanction of the Secretary of State to the reorganization of the college was received during the year.

The Medical College. (1901.)

88. There were 406 students on the rolls of the Medical College at the opening of the session; 42 subsequently joined and 76 were admitted to the sanitary inspectors' class in January. Of these 524 students 489 completed their curricula; 209 of them studied in the Hospital Assistant department, 135 in the College department, 103 in the Apothecary department and only one in the Chemist and Druggist department. Of 18 candidates in the first L.M. & S. degree examination 13 (72·2 per cent.) passed; of seven students who appeared for the second examination and of two who appeared for the final examination for the L.M. & S. degree none passed; in the first examination 16 out of 35 candidates (45·7 per cent.) and 11 out of 13 candidates (84·6 per cent.) for the second examination for the M.B. and C.M. degree passed; six students appeared for the third examination for the same degree, but none of them were successful. For the final examination for the diploma of Hospital Assistant 55 students appeared and 48 of them (87·8 per cent.) passed. The receipts declined by Rs. 13,568 to Rs. 67,780; the decrease was mainly due to a marked fall in the contributions from local boards and municipalities. The total charges during the year were Rs. 1,74,490 and were Rs. 10,553 less than in the previous year. The reorganization of the professorial staff under the new scheme necessitated a redistribution of chairs; the Principal, who had been formerly Professor of Medicine, was relieved of his teaching work.

The College of Agriculture. (1901-1902.)

89. Although the strength of the College of Agriculture fell from 42 to 38, the number of Brahmans on the rolls (21) remained stationary. Owing to the favourable season the students were able to enjoy more opportunities of engaging in practical work on the farm than they did in the previous year. Class III made two agricultural excursions during the year—one in October to the South Arcot district and the other in January to the Coimbatore district. The practical work of class II consisted to a great extent of "field-cultivation." Excluding the proceeds of the sale of condemned building materials, the receipts from the farm fell from Rs. 4,760 to Rs. 3,960; on the other hand the expenditure fell from Rs. 5,559 to Rs. 4,314; there was therefore a large decrease in its net cost. The results of the various examinations were fairly good. The total expenditure on the college rose from Rs. 34,314 to Rs. 37,797, while the receipts declined from Rs. 6,393 to Rs. 5,862. The Agricultural Chemist to the Government of India did duty at the college from the 4th to the 31st March. Owing to departmental exigencies the Superintendent, Civil Veterinary department, did not deliver any lectures at the college. The minors under the Court of Wards resident at Newington attended field-classes by arrangement with their tutor.

The College of Engineering. (1901.)

90. Excluding the students engaged in the practical courses, the number of students in the College of Engineering on the 31st December 1901 was 307, *i.e.*, one more than at the end of the previous year. The numbers of candidates who were examined for entrance into the Engineer class, the Engineer Subordinate class, the Sub-Overseer and Surveyor class and the Draftsman class were 49, 202, 321 and 136 respectively; of these 26, 116, 114 and 49 passed and 15, 36, 46 and 45 respectively were admitted. Survey camps were formed at Pallavaram in April and July; the numbers of students engaged were 176 and 205 respectively, and the charges amounted to Rs. 1,527 and Rs. 1,628; each camp lasted for three weeks. In October two

divisions of the Engineer class, two of the Engineer Subordinate class and one of the Sub-Overseer and Surveyor class, numbering 725 students, visited the Kistna and Gódávari districts, inspecting the head-works at Bezwada and Dowlaishweram, the Kistna bridge, the Public Works workshops and the principal works on the canal between Dowlaishweram and Cocanada; the tour extended over nine days. Three students of the senior division of the Engineer class appeared for the B.E. degree examination and two were successful; five ex-students presented themselves for the same examination and four passed. Twelve out of 18 candidates in the First examination in Engineering were successful. Good results were obtained by the college classes in the technical examinations, though, except in the case of the Sub-Overseer and Surveyor class, they compared unfavourably with those in the previous year. The receipts rose from Rs. 25,829 to Rs. 28,366 and the charges declined from Rs. 94,394 to Rs. 90,046; the net cost to Government fell therefore from Rs. 68,565 to Rs. 61,680 and the net cost of each student from Rs. 223 to Rs. 196.

The Teachers' College, Saidapet. (1901.)

91. The strength of the training section of the Teachers' College on the 31st December 1901 was 70, the same as on the 31st December 1900; 53 of the students were Brahmans. The strength of the practising school rose from 356 to 385. Of 32 candidates who appeared for the theoretical portion of the L.T. degree examination 29 passed; for the practical portion 29 candidates appeared and 18 of them passed. The results of other examinations were also satisfactory. On the 31st December 1901, there were 50 members on the rolls of the three hostels attached to the college; the conduct of the members of the hostels was satisfactory. A hostel for Christian students was built during the year. The total cost of maintaining the institution was Rs. 45,434; Rs. 5,210 were received as fees, etc.; the net cost of the college was therefore Rs. 40,224 and the net cost to Government of each student rose from Rs. 589 to Rs. 592.

Training College, Rajahmundry.

92. Three graduates and eight First-in-Arts undergraduates were under training in the Rajahmundry Training college on the 31st March 1902, the corresponding figures being three and nine respectively in the previous year. All but one of the students were Brahmans and all of them were in receipt of stipends. Three candidates went up for the theoretical portion of the L.T. degree examination and one candidate for the practical portion, and all of them passed, while four out of six and one out of two, respectively, passed in the previous year. At the teachers' certificate examination of the second-grade collegiate eight and five passed in the written and practical tests out of 13 and seven, respectively, that appeared. The total expenditure on the college for the year 1901–1902 was Rs. 4,886.

Upper Secondary Education.

93. For the upper secondary examination of 1901, 194 candidates (including one female who failed) presented themselves, of whom 27 passed; in the previous year 17 out of 132 candidates were successful. Of the total number of candidates presented, 96, of whom 18 passed, were pupil candidates belonging to 40 different institutions. Seven candidates completed the test during the year bringing the total number that have passed the examination in full during the twelve years of its existence to 49.

Public schools for boys.

94. The number of upper secondary schools for boys rose from 148 with 43,485 pupils in the year 1900–1901 to 157 with 45,643 (18,779 in the upper secondary department, 18,814 in the lower secondary department and 8,050 in the primary department) at its close. Of the total number of schools, 147 were recognised, 77 as permanent and 70 as temporary, as in 1900–1901. The number of Government upper secondary schools was five. Board schools increased by one during the year to 25. The number of aided schools continued to be 96, but the number of unaided schools rose from 23 on the 31st March 1901 to 31 on the corresponding date in 1902, 61 of the aided schools and three of the unaided schools being under the management of missions. The average strength of the upper secondary departments of Government, board, aided and unaided schools during 1901–1902 was 91, 97, 134 and 99 respectively and 98, 91, 125 and 118 in the previous year.

Scholarships.

95. As in the previous year, the Government scholarships notification provided for the award of 45 scholarships to boys passing the lower secondary examination and 25 to girls with the same qualification. The total expenditure on scholarships in upper secondary schools, including the lower secondary department, rose during the year from Rs. 13,435 to Rs. 14,440, of which provincial funds alone met Rs. 10,458 and Rs. 10,726 respectively.

Expenditure.

96. The total expenditure on upper secondary schools was Rs. 12,24,761. The average cost per pupil fell from Rs. 28–13–0 to Rs. 28–9–0. Government schools cost Rs. 19,517 less, and board, aided and unaided schools Rs. 7,204, Rs. 44,758 and Rs. 11,382 respectively more than in the previous year. The fee receipts in all classes of schools rose from Rs. 6,07,658 to Rs. 7,95,254, or by 31 per cent., and the average fee per pupil from Rs. 18–3–0 to Rs. 18–9–0. The average fee per pupil in Government, board and aided schools was Rs. 14, Rs. 22 and Rs. 18; and the cost to Government per pupil was Rs. 9, Rs. 4, and Rs. 3. The low average fee in Government schools is explained by the fact that two of the institutions were practising schools and one was a Muhammadan school, in all of which fees are levied at less than the standard rates. Of the total expenditure on upper secondary schools, Rs. 6,82,189, Rs. 3,84,037 and Rs. 1,58,535 appertained to the upper secondary, lower secondary and primary departments, while the fee collections from these departments were Rs. 4,78,931, Rs. 2,78,780 and Rs. 47,879 respectively. While the total fees covered 65 per cent. of the entire cost, fees in the upper secondary, lower secondary and primary departments met 70, 72 and 30 per cent., respectively, of the expenditure on the respective departments. The average cost per student in the upper secondary department alone was Rs. 40–3–4.

Lower secondary education.
Examination.

97. The number of male pupil candidates that appeared for the examination in the year under report fell from 6,945 to 6,459 and the number that passed for complete certificates from 2,194 to 1,988. Private candidates, however, increased from 2,996 to 4,003 and the number of them that passed from 724 to 928. The steady fall in the number of pupil-candidates during the last three years is due chiefly to a notification published in the Gazette in 1899 impressing on headmasters the fact that the examination was not obligatory on pupils. Among the male candidates, 50 per cent. of the number examined and 53 per cent. of the number that passed were Brahmans, the corresponding figures for the previous year being 50 and 57.

Public schools for boys.

98. Lower secondary schools for boys, both English and Vernacular, rose during the year from 375 to 381, and their strength from 35,786 to 37,851. State English schools fell from 282 to 280, while under vernacular schools there was a rise from 93 to 101; the average strength of the lower secondary departments of English schools rose from 52 to 54 and that of vernacular schools from 26 to 27. Of the 280 English and 101 vernacular schools, 260 and 64 respectively were recognized, 164 and 23 as permanent and 96 and 41 as temporary. The total number of recognized schools of this grade fell from 326 to 324.

Scholarships.

99. The number and distribution of scholarships remained unchanged during the year. Eighty scholarships were offered to boys on the results of the primary examination—44 open to all classes, six to Uriyas, and ten each to Muhammadans, Mappillas and pupils of backward classes.

Expenditure.

100. The total expenditure on lower secondary schools for boys was Rs. 5,31,312. The average number on the rolls was 35,670, and the average cost per pupil was Rs. 14. Towards the total expenditure, public funds contributed Rs. 83,801, fees Rs. 2,74,135 and other sources Rs. 1,32,398. Taking the lower secondary departments alone, public funds, fees and other sources contributed, respectively, Rs. 75,665, Rs. 2,04,406 and Rs. 80,496, against Rs. 97,031, Rs. 1,64,692 and Rs. 97,545. Of the cost of board and aided schools 18 and 13 per cent. were paid by Government as grants, while fees met 68 and 45 per cent., respectively. The average fee per pupil rose from Rs. 7–8–0 in 1900–1901 to Rs. 7–11–0; it was Rs. 1–12–0 in Government schools, Rs. 9–9–0 in board schools and Rs. 7–1–0 in aided schools. The low average fee in Government schools was due to the levy of merely nominal fees in the agency schools. The aggregate expenditure on the lower secondary departments of all Government, board, aided and unaided secondary schools for boys was Rs. 42,858, Rs. 1,53,297, Rs. 4,76,104 and Rs. 72,345, while it was Rs. 49,983, Rs. 1,59,423, Rs. 4,48,812 and Rs. 77,809 respectively in the previous year. Public funds, fees and private funds contributed 14, 65 and 21 per cent. respectively in 1901–1902 and 16, 63 and 21 per cent. in 1900–1901. The average number on the rolls being 34,604, the total cost and the cost to Government per pupil were Rs. 21–8–0 and Rs. 1–15–0 in 1901–1902 and Rs. 21–10–0 and Rs. 2–6–0 in the previous year.

Primary education.

Primary examination.

101. During the year the primary examination was conducted at 277 centres by 29 boards consisting of 533 members; 25,466 candidates were examined and of these 15,951 passed for complete certificates, the corresponding figures for 1900–1901 being 24,378 and 14,187. Pupil-candidates numbering 12,408 came up during the year from 2,087 boys' and 94 girls' schools, while 11,978 were presented in the previous year from 2,043 boys' and 98 girls' schools, and 6,469 males and 358 females, passed for complete certificates in 1901–1902 while 6,239 and 424 respectively passed in 1900–1901. The examination of 92 male pupils for the fourth standard was conducted by the inspecting officers, and of these 54 passed.

Public schools for boys.

102. Public primary schools for boys (including night schools) fell during the year from 19,483 to 19,093 but their strength rose from 583,197 to 588,626. Upper primary schools fell from 4,770 to 4,755, while their strength rose from 222,945 to 229,233, and lower primary schools fell from 14,713 with 360,252 pupils to 14,338 with 359,393 pupils. The number of the recognised upper primary schools fell from 4,666 to 4,664 and of those in the permanent section from 1,428 to 1,360. The number of lower primary schools in the recognised list rose from 11,842 to 11,980, but the number in the permanent section fell from 443 to 425. Public night-schools fell from 1,044 with 18,007 pupils to 775 with a strength of 14,212. The number of Government night-schools during the year was two with 32 pupils, while it was two with 27 pupils in 1900–1901, the number managed by local boards fell from 47 with 1,489 pupils to 32 with 1,124 pupils, the number aided fell from 581 with 9,630 pupils to 420 with 7,645 pupils, while the number unaided fell from 414 with 6,861 pupils to 321 with 5,411 pupils.

Primary schools for boys according to management.

103. The number of upper primary schools managed by the department was 159 with a strength of 6,774 against 163 with 6,737 pupils in the previous year. Lower primary schools under Government rose from 33 to 38 and their strength from 993 to 1,176. These Government schools were made up of the Reformatory school, Chingleput, 23 practising sections of training schools, 158 hill schools, and 15 schools for Muhammadans in the city of Madras. Of the pupils 1,172 or 15 per cent. were in the upper primary stage against 16 per cent. in the previous year. In the agency tracts there were 5,009 pupils, of whom 1,650 belonged to the aboriginal tribes, the corresponding figures for the previous year being 4,882 and 1,637, respectively. Of the upper primary schools, 1,864 with a total strength of 97,655 were managed by local boards and municipalities, against 1,860 schools and 95,529 pupils in the previous year; 1,693 schools with 11,547 and 73,188 pupils in the upper and lower primary stages respectively were under local boards, and 171 schools with 2,348 and 10,572 pupils in the same stages were under municipal councils. Lower primary schools under local boards and municipalities fell from 649 to 645, while their strength rose from 24,199 to 24,223. Of these 542 with 19,999 pupils were under local boards and 103 with 4,224 pupils under municipalities. Aided upper primary schools rose from 2,409 to 2,415 and their strength from 109,343 to 114,502; aided lower primary schools fell from 8,599 to 8,143 and their attendance from 220,542 to 215,008. Unaided upper primary schools fell from 338 with 11,336 pupils to 317 with 10,302 pupils, and lower primary schools rose from 5,432 with 114,518 pupils to 5,512 with 118,986 pupils. At the close of the year there were 197 Government schools with 7,950 pupils, 2,509 board schools with 121,878 pupils, 10,558 aided schools with a strength of 329,510, and 5,829 unaided schools with a strength of 129,288. Compared with the figures of the previous year, Government and unaided schools showed an increase both in their number and strength, while board schools remained the same in number with an increased strength, and aided schools sustained a fall in both respects, though their strength was not affected to the same extent as their number.

Scholarships.

104. Twenty-five scholarships were awarded during the year, five in each of the five standards from the infant to the fourth, the value of the scholarships ranging from As. 8 to Rs. 2. Forty Mappilla scholarships were awarded. The expenditure on scholarships in primary schools during the year amounted to Rs. 2,785. Children of the backward classes and those of the poorer classes continued to have the concessions hitherto enjoyed by them, viz., free scholarships or nominal fees, and books and slates *gratis*.

Expenditure.

105. The average number on the rolls rose from 567,038 to 571,024 and the total expenditure from Rs. 18,82,779 to Rs. 19,54,646. The expenditure from local

funds during the year fell by Rs. 2,949. The average cost per pupil which was Rs. 3-5-0 in 1900-1901 was Rs. 3-7-0 in 1901-1902. During the year Government schools cost Rs. 60,961, board schools Rs. 5,60,981, aided schools Rs. 10,80,419 and unaided schools Rs. 2,52,285, the corresponding amounts in the previous year being Rs. 58,177, Rs. 5,51,558, Rs. 10,51,244 and Rs. 2,21,800 respectively. Fees met 3 per cent. of the expenditure in Government schools, 20 per cent. in board schools and 29 per cent. in aided schools. Each pupil in a Government school cost Rs. 7-14-0, in a board school Rs. 4-11-0, and in an aided school Rs. 3-6-0 in 1901-1902, and Rs. 7-11-0, Rs. 4-11-0 and Rs. 3-4-0 respectively in the previous year. The aggregate expenditure on primary schools and primary departments of secondary schools for boys rose from Rs. 21,97,770 to Rs. 22,83,926.

Training of teachers. Teachers' certificates.

106. The numbers of trained candidates that appeared during the year for the written examinations of the upper secondary, lower secondary and primary grades were 211, 647 and 1,353 and the numbers of those that passed were 118, 324 and 511 while in 1900-1901 235, 705 and 1,434 candidates appeared and 75, 393 and 681 passed; the numbers of untrained candidates who appeared in these three grades rose from 34, 51 and 99 in 1900-1901 to 36, 73 and 106 and the numbers of those that passed were 8, 24 and 34 while in the previous year 15, 38 and 33 passed. For the practical test for teachers' certificates, which is open only to those who have passed the written test, 147, 461 and 814 candidates appeared for the upper secondary, lower secondary and primary grades respectively and 104, 350 and 548 passed, the corresponding figures for the previous year being 97, 416 and 832, and 88, 328 and 582. During the year under report 2,860 teachers' certificates were issued. Of these 1,929 were for trained teachers, 202 for untrained teachers and 729 were for approved service. Of the trained teachers' certificates, 42 were of the second-grade collegiate, 136 of the upper secondary grade, 597 of the lower secondary grade and 1,154 of the primary grade.

Training schools for masters.

107. The number of training schools for masters rose from 41 to 42, but their strength fell from 1,064 to 982, partly owing to greater strictness in the selection of students for training and partly owing to the temporary closing on account of plague of the Government Training School, Bellary. Thirty-one training schools were under departmental management, nine were aided and two unaided; there were no board schools. In all 63 students were under training for the upper secondary grade, 204 for the lower secondary grade and 715 for the primary grade. Of the 779 students in Government, 188 in aided and 15 in unaided training schools on the 31st March last, 768, 187 and 8 respectively were in receipt of stipends. The expenditure on stipends in the above classes of institutions amounted respectively to Rs. 47,794, Rs. 9,762 and Rs. 288 and of the total outlay provincial funds met Rs. 55,907. The total expenditure during the year on training schools for masters including stipends and stipendiary grants, but excluding special grants for furniture, apparatus and buildings, amounted to Rs. 1,23,321, of which provincial funds met Rs. 1,10,581, local funds Rs. 460, municipal funds Rs. 971, fees Rs. 161 and other sources Rs. 11,148. Of the entire expenditure 90 per cent. was paid from provincial funds. The cost to Government per student rose from Rs. 108 in the previous year to Rs. 120.

Training schools for mistresses.

108. There were, as in the previous year, 18 training schools for mistresses, with 331 students. Of the 18 schools, five with 149 students were English schools; five of the schools with 93 students were under departmental management, and the remaining 13 with 238 students were aided schools under mission management. Five of the schools were of the upper secondary grade, 12 were of the lower secondary grade and one was of the primary grade. Twenty-three students were in the upper secondary, 213 in the lower secondary and 95 in the primary departments, against 23, 188 and 135 respectively in the previous year. The strength of the practising sections rose during the year from 2,354 to 2,551. Of the 93 and 238 students who were under training in Government and aided training schools, 78 and 189 were stipendiaries. The total expenditure on stipends in these schools during the year was Rs. 19,879, towards which provincial funds contributed Rs. 19,616. The total expenditure in training schools for mistresses fell from Rs. 53,181 to Rs. 48,535; but the percentage paid from provincial funds rose from 67 to 75. The cost to Government per student fell from Rs. 119 to Rs. 111.

Training schools for gymnastic instructors.

109. The numbers of students attending the special classes for the training of gymnastic instructors attached to the Teachers' College, Saidapet, and to the Rajahmundry College fell from 26 and 10 in 1900–1901 to 12 and 3 respectively. During the year under report the Teachers' College gymnasium was reorgnanized, the number of annual admissions being reduced from 25 to 15 and the maximum number of provincial stipendiaries from 15 to 10, with a view to adjust the supply of instructors to the demand. The period of training has been increased from nine months to one year. The admission of students in the second term has been discontinued and only one final examination for gymnastic teachers' certificates will, in future, be held instead of two, one in April and one in December. During the year under report 34 students passed the examination for gymnastic teachers' certificates from the Teachers' College and eight from the gymnastic class, Rajahmundry, of whom 23 and one, respectively, were placed in the first class. Nine of the students, all trained at Saidapet, were in receipt of provincial stipends during the year. Twenty-nine gymnastic instructors obtained employment during the year, but 51 of the students trained in 1898–99 and in the succeeding two years remained unemployed on the 31st March 1902. The expenditure on these schools fell from Rs. 1,572 to Rs. 1,530.

Sessional schools.

110. Fifty-four sessional schools were worked during the year on the same lines as in past years and they were attended by 736 teachers, the corresponding figures for the previous year being 53 and 795 respectively. These schools were opened during the year in all districts except Kurnool, Anantapur, Madras, the Nilgiris, Malabar and South Canara. For the primary examination 696 teachers appeared for the complete test and 570 passed for certificates, while 587 passed out of 724 in 1900–1901. The total expenditure on these schools during the year fell from Rs. 18,287 to Rs. 17,494.

Technical and Industrial schools. Technical examinations.

111. The total number of subject-candidates * that appeared for the several technical examinations again rose during the year from 4,782 to 5,130, but the number that passed declined from 1,925 to 1,888; there was thus a further fall in the percentage of success, viz., from 40·2 to 36·8. Eighty-eight candidates appeared for the advanced technical examinations in 19 subjects, while 101 appeared in 16 subjects in the previous year; the number that passed fell from 46 to 40. Candidates appeared in three subjects not brought up in the previous year, viz., steam and the steam-engine, forestry, and wood-engraving, but there were no entries in building-drawing and estimating and in practical telegraphy. Five of the candidates were females, who all brought up needle-work and dress-making, and four passed. For the intermediate examinations the number of candidates fell from 1,178 in 56 subjects to 1,235 in 52 subjects, but the number of those who passed rose from 483 to 532. Only one new subject was brought up during the year, viz., cotton-spinning, but there were no entrants for machine-construction, steam and the steam-engine, machine-work under letterpress-printing, stereotyping and carpet-weaving, which were taken up in the previous year. Of the subject-candidates examined and passed, 59 and 29, respectively, were females, the majority of whom brought up needle-work and dress-making. The number of candidates for the elementary examinations rose from 3,503 in 48 subjects to 3,807 in 49 subjects. All the subjects brought up in the previous year were represented with the addition of machine construction. One hundred and ninety-two of the candidates were females, and of these 96 were successful. The bulk of the female candidates brought up free-hand outline drawing. Four diplomas, of which three were for agriculture and one was for drawing, and 27 group-certificates, which included one for sanitary science and one for shorthand, were issued during the year; in the previous year seven diplomas and 55 group-certificates were issued.

Medical schools.

112. As in the previous year, two medical schools were at work, and these had 368 and 19 pupils on the rolls on the 31st March 1902. Of the pupils attending the school department of the Medical College, 100 (including 17 women) were qualifying for the apothecary's diploma, 196 (including three women) for the

* The number of subject-candidates is obtained by counting each candidate once for each subject that he takes up.

hospital assistant's certificate, one for a certificate as chemist and druggist, and 71 for certificates as sanitary inspectors. All the pupils of the Tanjore school were under training as hospital assistants. Two hundred and seventy-nine pupils of the Madras school and one pupil of the Tanjore school were in receipt of stipends. For the final examination for the hospital assistant grade held in March 1901, the Madras and Tanjore schools presented 55 and 9 pupils, of whom 48 (including three placed in the first class) and 5 passed, respectively. The expenditure on medical schools amounted to Rs. 95,786, of which local funds met Rs. 27,441, municipal funds Rs. 19,612, and fees and other receipts Rs. 10,106. The total expenditure under this head during the quinquennium was Rs. 5,07,175.

Other technical and industrial schools.

113. Technical, industrial and art schools are arranged in two classes: a higher class, the instruction in which is based on the syllabus for the Government technical examinations; and a lower class, in which more elementary instruction is given according to the curriculum contained in the Madras Educational Rules, Chapter V (III). The number of higher class schools in which instruction was being given in subjects coming under two or more groups of the technical examination scheme rose from 21 to 23, but their strength fell further from 1,779 to 1,755. Among other changes, the Reformatory School, Chingleput, was brought on to this list during the year, while the board industrial school at Bezwada passed into the list of lower class technical schools. The number of subject-candidates fell from 2,843 to 2,409, the decrease being chiefly under those learning engineering, drawing and wood-work. Commerce, textile industries and tailoring and dress-making were more popular than in the previous year. The number of higher class schools teaching subjects coming under only one group of the technical examination scheme fell from 24 to 22, the decrease being under the schools of music, drawing, and textile industries. Of the 22 schools, four were schools of music, three of drawing, two of civil and mechanical engineering, two of electrical engineering, six of commerce, two of printing, and three of textile industries. The total strength of these schools declined from 1,498 to 1,062, the decrease being marked in schools of music, drawing and electrical engineering. Lower class schools rose in number from 10 to 12 and in strength from 253 to 406. Of the twelve schools, two were under board management, five were aided and the rest unaided. Eighty-four pupils were receiving instruction in carpentry, 11 in blacksmith's work, 129 in lace-making, 51 in embroidery, 34 in tailoring, 40 in music, 80 in free-hand drawing and 8 in book-keeping on the 31st March last. There were nine other schools to which technical or industrial classes were attached and they bore on their rolls 611 pupils on 31st March last. Of the nine schools, two were under departmental management, one was under board management, four were aided and two were unaided. One hundred and thirteen students, trained in the several technical schools, excluding medical schools, are reported to have obtained employment during the year, against 356 in the previous year. Articles of the value of Rs. 88,811 were produced in 26 of these schools, and the amount realized by sales was Rs. 76,891, the corresponding figures for the previous year being Rs. 85,020 and Rs. 64,980.

Scholarships.

114. Of the 180 scholarships usually offered on the results of the technical examinations, the number actually awarded rose from 51 in the previous year to 53. Of these, 10 were awarded on the results of the intermediate examinations, 12 on those of the elementary examinations, 6 on those of the examinations in standard D, 7 on those of the examinations in standard C, and 18 on those of the examinations in standard B. A larger number of scholarships could not be awarded for want of eligible candidates. Grants for scholarships were given under the provisions of the Grant-in-Aid Code to a few institutions. The total expenditure on scholarships in technical and industrial schools amounted to Rs. 27,772 during the year, provincial funds contributing Rs. 15,265.

Expenditure.

115. The total expenditure on technical schools during the year rose from Rs. 2,15,025 to Rs. 2,64,069. Of the total expenditure 28 per cent. was met from provincial funds and 11 per cent. from fees.

Education of females. Schools.

116. Taking all classes and grades of institutions together, the total number of institutions for girls was 1,070 with 130,432 pupils at the close of the year under report and 1,122 with 128,073 pupils in 1900–1901. The number of

public institutions for girls during the year under report was the lowest and the attendance therein the highest in the last decennial period, the fall in the former case being confined to primary schools. This increase in strength despite the decrease in the number of institutions is indicative of greater consolidation, the closing of weak or ephemeral schools tending to increase the strength of schools established on a firmer footing. The number of girls attending boys' schools rose from 69,577 or 54·3 per cent. of the whole number of girls under instruction to 72,677 or 55·7 per cent.

University examinations.

117. For the First examination in Arts 24 female candidates—one non-Brahman caste Hindu, 18 Europeans and 5 Native Christians—appeared and 12—nine Europeans and three Native Christians—passed. The total number of women who have passed the examination up to the present is 57, of whom 4 are Brahmans, 43 Europeans and 10 Native Christians. For the B.A. degree examination two female candidates, both Europeans, appeared for the whole or part of the examination; and only one qualified herself for the degree. Two women passed the English branch of the M.A. degree examination.

Colleges for women.

118. Three colleges of the second-grade were at work during the year. The combined strength of the senior F.A. classes in them on the 31st March 1902 was two, and that of the junior F.A classes was eight. For the First examination in Arts of December last eight appeared and four passed. In colleges intended for males, there were 25 female students.

Secondary education.

119. For the last upper secondary examination only one female candidate appeared and she failed. For the last matriculation examination 168 female candidates appeared and 50 passed—all in the second class—the majority of these being, as usual, Europeans. The last examination brought the total number of female matriculates up to 503. Public upper secondary schools for girls numbered 25 with 2,913 pupils, the number of schools being the highest during the preceding six years and their strength the highest ever attained. The numbers in the upper secondary, lower secondary and primary departments were 474, 679 and 1,760 respectively. Of the 24 aided and unaided schools with 2,729 pupils, 23 with 2,578 pupils were under mission management. Of 474 pupils in the upper secondary stage of instruction, 249 were Europeans and 219 were Native Christians. The number of female candidates for the lower secondary examination was 722, of whom 623 were pupil candidates: the number that passed was 513, of whom 468 were pupils. In the previous year, 404 passed out of 736 candidates. The number of pupils presented for the fifth and sixth standard examinations fell from 214 and 116 to 181 and 100 respectively, and those that passed from 149 and 74 to 105 and 65, the percentage of passed to examined having fallen in the former case from 69·6 to 58·0 and risen in the latter case from 63·8 to 65·0. Forty-four girls presented for the seventh standard were tested at the lower secondary examination, and 27 passed, while 33 passed out of 51 in 1900–1901. The number of public lower secondary schools for girls again fell from 185 to 172 and theirs trength from 18,036 to 17,024. There were 47 Government schools with 5,101 pupils, one board school with 211 pupils, 120 aided schools with 11,484 pupils, and 4 unaided schools with 228 pupils. Nineteen of the schools were unrecognized. The total number of girls in the secondary stage of instruction on the 31st March 1902 in all classes of schools was 4,066.

Primary education.

120. For the primary examination 1,392 girls appeared, of whom 975 passed for certificates, while 962 passed out of 1,380 in 1900–1901. Of the girls who appeared for the examination during the year under report, only 629, or 53 fewer than last year, were pupil-candidates. The number of girls' schools that presented and passed pupils for the results-grant examinations under the five primary standards was 1,805 and 1,699, these figures being the lowest in the past quinquennium. The numbers of girls that passed in standards infant to fourth were 8,361, 6,768, 5,036, 2,772 and 800 respectively during the year under report and 8,626, 7,349, 5,223, 2,812 and 637 in the previous year, the decrease being due to the fall in the number of results-grant schools that was caused by the introduction of the fixed grant system. Compared with that of the previous year, the percentage of passed

to examined was higher in the infant, second and fourth standards. Of the 1,086 girls examined for the fourth standard, 509 were tested at the primary examination, and 378 were successful; in the previous year 614 were tested and 445 passed. The number of primary schools under public management was 130 with 7,999 pupils, while 652 schools with 30,926 pupils were under private management, the corresponding figures for the previous year being 127 and 7,774 in the case of the former, and 695 and 30,656 in the case of the latter class of schools. Of the former class, 104 schools with 6,343 pupils were under Government, and 26 schools with 1,656 pupils under board management, Government schools having increased by one and board schools by two; while aided and unaided schools respectively fell from 574 and 121 with 26,884 and 3,772 pupils respectively to 567 and 85 with 27,998 and 2,928 pupils, the fall under unaided schools being mainly due to the amalgamation of weak girls' schools with schools for boys. Of the aided schools, 343 with 19,842 pupils and of the unaided schools, 28 with 981 pupils were under mission management. There was, on the whole, a loss of 40 schools accompanied by an increase of 495 pupils, upper primary schools having increased both in number and strength and lower primary having declined in both respects. The number of pupils in the upper primary stage was 372 in Government, 95 in board, 1,992 in aided and 60 in unaided primary schools. Of the 782 primary schools for girls, 696 were recognized, 240 being in the permanent and the rest in the temporary section of the general list of schools. Of 2,937,611 girls of school-age the number in public schools, both primary and secondary, in the primary stage of instruction rose from 110,904 to 112,933. The proportion of pupils to the female population of school-age was 3·8 per cent. as in the previous year.

Scholarships.

121. Of 25 and 40 scholarships provided for girls on the results of the lower secondary and primary examination, respectively, 24 and 35 were awarded, the majority of the recipients being Native Christians. All the 60 special scholarships granted on the results of the primary examination were awarded during the year, 11 to Brahman and the rest to non-Brahman caste Hindu girls; among Muhammadan girls there were no eligible candidates. Seven scholarships were given on the results of the matriculation examination—three to Europeans and four to natives. Scholarship-grants also were given according to the provisions of the Grant-in-Aid Code. The expenditure on scholarships during 1901–1902 fell from Rs. 10,175 to Rs. 9,849, of which provincial funds met Rs. 6,866.

Expenditure.

122. The expenditure in secondary and primary schools for girls amounted to Rs. 7,29,224, of which provincial funds contributed Rs. 2,50,043, local and municipal funds Rs. 8,856, fees Rs. 79,012, and subscriptions and other sources Rs. 3,91,313. The total average cost and the average cost to public funds per pupil rose from Rs. 12–7–0 and Rs. 4–3–0 in the previous year to Rs. 12–13–0 and Rs. 4–9–0 respectively, and the average fee paid by each pupil was Rs. 1–6–0 as in the previous year.

Zenana agencies.

123. Four groups of home-education classes of the secondary grade conducted by zenana agencies returned 98 pupils during the year, of whom one was in the upper secondary, 21 were in the lower secondary, and 76 were in the primary department, while there were five groups of classes with 2, 30 and 78 pupils in the respective departments in the previous year.

Education of Europeans. Institutions.

124. Institutions for Europeans rose in number from 101 to 103, but their strength fell from 8,350 to 8,223. They comprised 3 colleges, 73 secondary, 18 primary, and 7 special schools, the pupils in these four classes of schools numbering 47, 6,891, 870 and 415 respectively. The corresponding figures for schools and strength for the previous year were 5, 75, 11, 10 and 55, 6,983, 502 and 810. The total number of European scholars in all classes of institutions which was 7,876 in 1900–1901 was 7,636 on the 31st March 1902. The European population of school-age, calculated in the usual way at 15 per cent. of the total European population, consisted of 3,223 boys and 2,812 girls according to the census figures of 1901. It would seem, therefore, either that all the children of this class are being educated, as well as some who are beyond 'school-age,' or that the ordinary method of calculating the population of school-age is wrong.

125. Of 5, 8 and 9 candidates that appeared in English, second language and science, respectively, for the B.A. degree examination, 4, 5 and 5 passed including three women, of whom one passed in English and two in second language. The number that passed completely was three. At the First examination in Arts 13, including 9 females, were successful out of 31 examined. For the several examinations in Medicine 11 appeared and 5 passed including 1 female. In the five colleges for Europeans there were in all 2[illegible] students including 6 females belonging to the community out of a total strength of 47; but taking into account the students reading in other colleges, the total number rose from 41 in the previous year to 42, including 27 females. Collegiate education.

126. Out of 81 boys that appeared for the matriculation examination during the year 16 were successful, while in 1900–1901, 15 were successful out of 85. For the upper secondary examination no male candidates presented themselves. At the lower secondary examination the number of candidates who passed rose from 70 out of 274 who appeared to 77 out of 262. Of 73 secondary schools 34 were for boys and 39 for girls, 10 of the boys' schools being of the upper secondary grade. Secondary education.

127. Of 81 male entrants for the primary examination 57 passed, while 37 passed out of 73 in the previous year. Primary schools rose in number from 11 to 18, of which 7 were for boys and 11 for girls. Primary education.

128. Four European female candidates appeared for the whole or part of the B.A. degree examination and one qualified for the degree. At the First Examination in Arts and the matriculation examination 9 out of 18 and 31 out of 107 passed; while at the lower secondary and primary examinations 193 out of 256 and 88 out of 111 were successful, the corresponding figures for the previous year being 4 out of 13, 29 out of 102, 156 out of 245, and 57 out of 88, respectively. For the upper secondary examination none appeared. As in the previous year the Doveton College, though not classed among colleges for women, had the largest number of women on its rolls, viz., 14 out of a total collegiate strength of 18, while the number attending the two Presentation Convent colleges in Black Town and Vepery intended for European women stood at six. Secondary, primary and special schools for European girls numbered 39, 11, and 4 with 3,272, 474, and 187 pupils, respectively, the corresponding numbers in the year 1900–1901 being 43, 8, and 7 with 3,539, 373, and 583 pupils. Female education.

129. Special schools comprised three industrial schools for boys and four girls' schools, of which three were schools of music. Male pupils under instruction fell in number from 366 to 323; the number of female pupils fell from 614 to 250. The fall in the number and strength of technical schools for girls was due to the fact that in previous years the singing, drawing and dress-making classes attached to the Presentation Convent music class, Black Town, were, under a misapprehension, treated as separate schools, though the same pupils were receiving instruction in all of them. Special education.

130. The Madras Railway Company's schools rose from nine to ten and their strength from 411 to 414. They have a common circulating library at Perambúr. The amount which they received from provincial funds fell from Rs. 3,413 in the previous year to Rs. 3,223. The South Indian Railway Company maintained two schools, one at Negapatam and the other at Madura; their strength fell from 100 to 93. The amount paid to them from provincial funds rose from Rs. 268 to Rs. 402. Railway schools.

131. European females gained 3 out of the 25 scholarships annually awarded by Government on the results of the matriculation examination. The total expenditure on scholarships in European schools amounted to Rs. 3,381, towards which provincial funds contributed Rs. 1,737. Under the orders of the Government of India based on the resolution of the Simla conference, a scheme of scholarships for Europeans in secondary schools and in arts and professional colleges was proposed during the year and has now received the sanction of Government. Scholarships.

132. The expenditure in European institutions rose from Rs. 7,17,618 to Rs. 7,18,140. Public funds met 21 per cent., fees 16 per cent. and private funds 63 per cent. Expenditure.

Education of Muhammadans.

Institutions.

133. There was a satisfactory advance both in the number and strength of these institutions, the figures for the year under report being the highest for the last five years, and those for 1900–1901 being the lowest. The number of public institutions was 1,054, and their strength was 47,368; the number of private institutions was 1,076 with a strength of 32,968.

Students.

134. The number of male students in the collegiate stage of instruction was 80 in arts colleges and seven in professional colleges. In the secondary stage the numbers were 558 in the upper secondary and 1,766 in the lower secondary; while in the primary stage also the number rose to 58,369. There were no girls above the lower secondary stage and the number in this stage was 29; in the primary stage there were 10,912 girls. In training schools there were 67 male students and 10 females, and in other special schools 341 and 34, respectively. On the whole there were 60,773 boys and 10,941 girls receiving a general education and 415 boys and 44 girls in special schools.

Collegiate education.

135. Of the 80 students in arts colleges, 23 were attending the Madras Christian College and 18 the Presidency College. Twenty-four candidates appeared for one or more parts of the B.A. degree examination and seven qualified for the diploma. At the First examination in Arts 11 passed out of 35 candidates while 15 passed out of 46 in the previous year. The results of the B.A. degree examination were on the whole fair and showed an improvement, except in science, over those of the previous year.

Secondary education.

136. The number of secondary schools for Muhammadans was ten; two of these were upper secondary schools with a total strength of 450. Lower secondary schools for Muhammadans increased in number by one and in strength by 26. At the matriculation and lower secondary examinations 195 and 371 respectively appeared and 50 and 74 passed, while in 1900–1901 26 and 81 passed out of 182 and 412. The marked increase in the number that passed the matriculation examination is accounted for by the general improvement in the matriculation results at the last examination. For the upper secondary examination seven appeared and two passed in 1901–1902 and one passed out of four in 1900–1901.

Primary education.

137. The number of public primary schools for Muhammadans was 1,037 and their strength was 45,915. There was an increase of 177 schools and 9,246 pupils. Of the primary schools 45·8 per cent. were managed by local boards while 53·6 per cent. were so managed in the previous year. The number of boys that appeared for the primary examination was 1,563, of whom 918 passed for certificate, against 857 out of 1,516 in 1900–1901. These results showed fair improvement.

Female education.

138. Excluding schools for special education and including indigenous schools, the number of schools for girls rose from 120 with 4,547 pupils in 1900–1901 to 162 with 5,472 pupils. No female candidate appeared for the matriculation examination, but all the four pupils who appeared for the lower secondary examination were successful; in the previous year one candidate passed out of three. At the primary examination 27 passed for certificates out of 35 that appeared, while 37 passed out of 46 in 1900–1901.

Special education.

139. Special schools for Muhammadans fell in number during the year from eight to seven and in strength from 262 to 254. The decrease was due to the closing of the industrial school at Arsúr, Cuddapah, known as Dabistani Kauphia Bagini Seminary. The Law College and the College of Agriculture had each two Muhammadan students, and there was one each in the Medical, Teachers', and Engineering Colleges; ten Muhammadan pupils were attending the School of Arts, 39 the School of Medicine and two the School of Engineering. Of the 35 Muhammadan male students under training 20 belonged to the Muhammadan Branch Training School, Madras, and 15 to the Mappilla Training School, Malappuram. Of the female students under training six were in the Government Hobart Training School, Madras, and two in the school at Gunnairbeed. The two industrial schools specially intended for Muhammadans, viz., the Anjumani Mufidi Ahlai Islam in Madras and the one for Muhammadan women at Guntúr had, respectively, 100 and 31 pupils on their rolls.

Mappillas.

140. Public schools for Mappilla boys rose in number during the year from 274 to 357 and in strength from 14,807 to 19,018, while private schools fell from 298 to to 295, but advanced in strength from 11,285 to 11,485. Of public schools one, a

practising school with 15 pupils, was managed by the department, 108 with 6,913 pupils were managed by local boards and municipalities and 109 with 5,730 were aided from public funds, while the remaining 139 with 6,360 pupils were unaided. Public girls' schools fell from 13 with 627 pupils to 12 with 621 pupils. Eight of the girls' schools with 422 pupils were under Government, three with 150 pupils were aided from public funds and one with 49 pupils was unaided. There were, on the whole, 623 teachers employed in public primary schools, of whom 102 held trained teachers' certificates, 4 untrained teachers' certificates, 49 general education certificates, 45 approved service certificates, and 127 were trained but uncertificated, while 286 or nearly 46 per cent. were unpassed; in the previous year 48·1 per cent. were unpassed. The total expenditure on Mappilla education during the year amounted to Rs. 37,591 and was made up of Rs. 22,402 from provincial funds, Rs. 9,156 from local funds, Rs. 5,667 from municipal funds, Rs. 190 from fees and Rs. 176 from other sources.

Scholarships.

141. The numbers actually in receipt of scholarships were 42 Muhammadans and 18 Mappillas. Two of the Muhammadan scholarships were held in B.A. classes, 9 in First Arts classes, 13 in upper secondary, and 18 in lower secondary forms; of the Mappilla scholarships 4 were held in First Arts classes, 3 in upper secondary, 11 in lower secondary, and 40 in primary classes. Special scholarships were given to 46 children of Carnatic stipendiaries and 20 scholarships were awarded to Mappilla students in the Calicut School of Commerce.

Expenditure.

142. The total expenditure on Muhammadan and Mappilla schools during 1901–1902 amounted to Rs. 2,67,126, of which Rs. 63,249 was met from provincial funds, Rs. 49,750 from local funds, Rs. 26,356 from municipal funds, Rs. 41,202 from fees and the balance of Rs. 86,569 from subscriptions, endowments and miscellaneous sources. In other words 52 per cent. of the entire expenditure was met from public funds, 16 per cent. from fees and 32 per cent. from other sources.

Education of Panchamas. Institutions.

143. The total number of schools for Panchamas rose from 2,636 in 1900–1901 to 2,934 in 1901–1902 and the number of pupils from 59,842 to 69,464. The figures for the year under report were the highest on record. There was, however, a decrease in secondary schools, the number being only 14 with 1,241 pupils. This may have been partly due to the fact that Panchamas are now more readily admitted into ordinary secondary schools than hitherto. Of the total number of schools 36 are classed as private and the rest as public. Only six public schools were managed by Government and 419 by local boards: the large majority (2,473) are under private, mostly missionary, management. Of the schools under private managers 1,612 received aid in 1901–1902; this is an increase from 1,477 in the previous year. The pupils in these schools are of course not all Panchamas.

Stages of instruction.

144. As might be expected, very few Panchamas go beyond the primary stage of education. There were, however, in public institutions, four male Panchama students in the collegiate stage and ten in the upper secondary stage. There were no girls in either of these stages. In the lower secondary stage there were 214 boys and 31 girls; and the rest, 43,823 boys and 8,295 girls, were in the primary stage. There were also 48 boys and two girls in training schools, one male student in a professional college and 50 boys in other special schools. The number of boys in all stages of instruction rose from 41,569 in 1900–1901 to 44,150 and that of girls from 7,503 to 8,328. Only 403 boys and 61 girls appeared for the primary examination, of whom 199 boys and 39 girls passed. Of boys of school-age 15·7 per cent. were attending schools and 2·6 per cent. of girls.

Expenditure.

145. The expenditure on Panchama schools was Rs. 2,80,748, towards which provincial funds contributed Rs. 17,571, local funds Rs. 59,270, municipal funds Rs. 20,088, fees Rs. 18,615 and other sources Rs. 1,65,204. Of the expenditure 34 per cent. was met from public funds, 7 per cent. from fees and 59 per cent. from private funds.

Education of the Aboriginal and Hill Tribes.

146. In the Agency tracts of the three nothernmost districts, in which the majority of these tribes are found, there were, on the 31st March 1902, 349 schools specially intended for the aborigines with an attendance of 8,632 pupils. Of the public schools, which numbered 301 with a strength of 8,237, 164 with 5,530 were under departmental management, 77 with 1,478 were aided and 60 with

1,229 were unaided, the corresponding numbers in the previous year being 164 with 5,381, 106 with 2,066, and 50 with 1,016, respectively. Private or indigenous schools, which were, as in the previous two years, found in the Vizagapatam and Gódávari agencies only, rose in number from 42 to 48, but their strength (395) remained almost stationary. Of the three agencies Ganjám had 137 schools with 3,805 pupils, Vizagapatam 140 with 2,954 pupils, and Gódávari 72 with 1,873 pupils. Seven of the schools were of the secondary grade and the rest were primary schools. The total number of pupils belonging to the aboriginal tribes under instruction in all classes of schools in the three agencies further declined from 3,331 to 2,966 during the year. Provision also existed for the education of the various aboriginal or hill tribes found in other parts of the Presidency. In Kistna there was a board school for the Lambadies with 14 pupils. In Kurnool there were two board schools for Chenchus containing 73 pupils; these pupils were fed and clothed and also given a supply of books and slates out of local funds. In Nellore the number of pupils of the Yenadi and Yerukula classes reading in Hindu schools rose from 91 to 131. In Trichinopoly out of the two schools for the Malayalis found on or near the Pachamalais in the Perambalúr range, the aided school collapsed for want of attendance, while the board school continued with 22 pupils. In Coimbatore there was a board school with 25 pupils for the Malasars, a hill tribe on the Satyamangalam ghâts. On the Nilgiris there were 34 schools with 1,085 pupils for Badagas (not treated as aborigines), two with 39 for Kotas, and one with 9 pupils, under the management of the Church Missionary Society, for Todas. The board school for the Malayalis on the Kollimalais in Salem, which had been temporarily closed, was revived during the year; in this and in the unaided school in the district 57 Malayalis were under instruction besides seven more in other schools. In Malabar there were no schools specially intended for the hill tribes found in the Wynaad and on the borders of the Chirakkal taluk, such as Kurichyas, Kurumas, Paniyas, etc., but the number of pupils of these classes reading in other schools on the 31st March last was 74. There were in all 3,327 boys and 122 girls belonging to the aboriginal tribes in all classes and grades of institutions in the Presidency at the close of the year under report, the corresponding figures for the previous year being 3,650 and 110.

Expenditure.

147. The total expenditure on schools for aboriginal and hill tribes during the year under report was Rs. 46,289, towards which provincial funds contributed Rs. 40,443, fees Rs. 3,254, and subscriptions and other sources, including contributions from Jeypúr and Singapúr in Vizagapatam, Rs. 2,592.

Education of the blind and of deaf-mutes.

Schools for the blind.

148. The number of schools for the blind was the same as in the previous year, viz., three—two for boys and one for girls. The total number of blind children under instruction rose from 36 to 38, of whom 8 were girls. Three pupils appeared for the primary examination and passed with one in the first class. Of former students 12 are employed as teachers and are said to be doing good work. The chief industries taught in the schools are rope-making, mat-weaving, mat-knitting, and gardening. Three girls are being trained for teaching. The Christian Association for the education of the South Indian Blind, Madras, had 16 pupils under instruction, including two girls, instruction being given up to the second standard. The children are taught English, Tamil and arithmetic. Advanced pupils are paid for embossing books, and several copies of the gospels and the standard readers have been prepared.

Schools for deaf-mutes.

149. The two schools for deaf-mutes at Palamcottah, one for girls and the other for boys, were amalgamated during the year. The strength of the mixed school on the 31st March last was 68, of whom 36 were girls, and education was given up to the fourth standard. The boys of the school are taught carpentry, mat-making and weaving. A Hindu caste hostel exists in connection with the school, and the number of boarders on the 31st March 1902 was five.

Education of native chiefs and noblemen.

150. There is no public institution in this Presidency specially intended for the education of native chiefs and noblemen. There were 14 wards during the year under the Court of Ward's tutor at Newington, of whom all except three are reported to have made steady progress. The wards under private tuition of whom six were females also seem to have made fair progress in their studies. Twenty-three of the wards were under instruction in public schools,—8 in the

upper secondary stage, 11 in the lower secondary and 4 in the primary. Instruction in agriculture is now given at Newington, and one of the assistants of the College of Agriculture, Saidapet, has been engaged for the purpose.

Private institutions.

151. Private institutions, which include all indigenous schools that have not accepted the departmental or University standards of instruction and do not submit to any public test, are classified under (i) advanced or high-class indigenous schools teaching (*a*) Arabic or Persian, (*b*) Sanskrit, (*c*) any other oriental classical language; (ii) elementary indigenous schools teaching a vernacular language only or mainly; (iii) elementary indigenous schools teaching the Quran; and (iv) other schools not conforming to departmental standards. A special sub-assistant inspector of Sanskrit schools was appointed in March 1900, and he completed his first tour through the Presidency in September 1901. He inspected 154 schools, of which ten were in receipt of salary-grants. Returns for the year 1901–1902 were received from 181 schools, of which 8 were classed as high schools and 173 as middle. The number of private institutions was 5,699 and their strength advanced to 121,013. Of the 5,699 institutions, 229 were high-class indigenous schools teaching Sanskrit, Arabic or Persian language and literature, 4,356 were elementary schools teaching a vernacular only, 1,021 were Quran schools, and the remaining 96 were schools not conforming to departmental standards. As in previous years Sanskrit schools alone received aid under the Grant-in-aid Code in the form of salary and special grants, amounting in all to Rs. 1,084, distributed between ten schools. Other schools supported themselves from endowments or from funds attached to mosques and chatrams, while in many elementary schools the teachers depended on fees in cash or in kind or on donations and other receipts. Of the high-class indigenous schools (229 in number), the number of Sanskrit high schools fell from 13 with 314 pupils in the previous year, to 8 with 268 pupils and the number of pupils attending the two Arabic schools fell from 255 to 110. On the 31st March last there were also 173 Sanskrit and 43 Arabic middle schools with 2,344 and 2,455 pupils respectively, while there were three schools not conforming to departmental standards. The number of elementary indigenous schools was 5,470 with 115,777 pupils. Of these 5,412 schools with 114,532 pupils were for boys and 58 with 1,245 pupils for girls.

Manual training.

152. The manual training class which was opened in the College of Engineering during the quinquennium for the purpose of training teachers in carpentry and blacksmiths' and fitters' work has not worked very successfully. It was attended by only two apprentices last year and the number in it on the 31st March 1902 was only one. Manual training classes exist in the Lawrence Asylum, Ootacamund, and in a few other institutions, and are making fair progress.

Physical education.

153. Provision for gymnastic instruction was made in 5,703 schools and colleges out of a total number of 20,792. In the majority of institutions, however, in which gymnastics are not taught, exercises in drill or calisthenics are taught. Clubs for games and sports exist in most colleges and high schools, while in Madras and in some mufassal towns inter-school tournaments are held every year. The number of institutions in which European gymnastics was taught rose from 4,732 to 5,040 during the year and those schools in which instruction in native gymnastics was given increased in number from 564 to 663.

Attendance.

154. The statistics for the year showed that 731,209 (or 1 in 4) males and 130,432 (or 1 in 23) females were receiving education out of a population of school-age of 2,855,849 males and 2,937,611 females, respectively. The average daily attendance in public schools during the year 1901–1902 was 605,272, and in private institutions 102,221 or altogether 707,493 out of 861,641 on the registers, or 82 per cent. The percentages of average daily attendance to the average number on the rolls during the year in Government, board, aided, and unaided colleges were 91, 89, 90, and 86 in 1901–1902 and 92, 87, 89, and 90 in 1900–1901; for secondary schools the figures were 79, 87, 85, and 85 in 1901–1902 and 80, 87, 86, and 87 in 1900–1901 and for primary schools 77, 85, 84, and 86 in 1901–1902 and 76, 84, 84 and 87 in the previous year.

Hostels and boarding houses.

155. The Victoria hostel continued to work successfully throughout the year and increased accommodation will be provided, a grant of Rs. 70,000 having been made for the purpose. Most of the boarders belong to the Presidency College.

The hostels attached to the Teachers' College, Saidapet, and the one attached to the Panchama Training School, Madras, are reported to be working satisfactorily. On the 31st March 1902 there were 95 boarding houses with 6,600 male boarders and 83 such institutions with 4,120 female boarders, showing an increase of 1,928 male boarders, chiefly Native Christians and Panchamas, and a decrease of three hostels for females and of 196 female boarders. Of the 178 boarding houses, 17 were for Europeans, 127 for Native Christians, 15 for Hindus and 19 for Panchamas. The boarding houses for boys cost Rs. 2,83,124 and those for girls Rs. 1,80,662, of which Rs. 40,870 and Rs. 15,304 respectively were paid from provincial funds. Besides the hostels and boarding houses referred to above there are similar institutions licensed by colleges under the University regulations, in which some of the students board and lodge.

School buildings.

156. Of 20,787 institutions, the number of schools with buildings of their own was 7,214, while the numbers of those held in rented buildings, or in chavadis and temples or in managers' or headmasters' houses were 5,292, 4,849 and 3,432 respectively. Building-grants to the extent of Rs. 44,014 were paid from provincial funds during the year towards the erection of schools. The amount promised and not paid by the 31st March 1902 was Rs. 1,31,611.

The Text-Book Committee.

157. During the year 296 books were examined by the Committee, of which 172 were found suitable for use in schools and 124 unsuitable, including also those considered suitable for libraries or for teachers. It is creditable to the Committee that there were no books awaiting disposal on the 1st April 1902. About the middle of last year, in accordance with the wishes of the Government of India that text-books in Government and board schools for each particular course should be absolutely prescribed, a selection of suitable books from the approved list was made by a committee formed for the purpose.

Commissioner for Government Examinations.

158. The general educational examinations and technical examinations have been dealt with already.

The Hand-writing and Dictation Test.

159. One thousand four hundred and eighty-three candidates appeared for the hand-writing and dictation test that was held in May, and 892 for the test held in December as part of the upper secondary examination, and 491 of the former and 228 of the latter were successful.

Examinations in connection with the Subordinate Medical Department.

160. For the grade of Civil Medical Pupil, there were received in all 32 applications. The number of Muhammadan candidates fell from 31 in 1900 to 1, as certain concessions were withdrawn. The general educational qualification required in the case of candidates for the grade of Native Military Pupil having been relaxed, the great majority of the candidates for the competitive examination for this grade were men who had passed only the lower secondary examination. All the candidates for the grade of Madras-Burma Hospital Assistant were matriculates. For this grade, 10 candidates were examined, of whom 6 were selected, and for the grade of Military Pupil, Assistant Surgeon, 67 were examined, and 30 were selected.

Special tests, chiefly Revenue and Judicial.

161. For the special tests (Revenue and Judicial), 4,632 candidates in all registered their names, 3,905 presented themselves for examination and 1,038 passed. The results were poor, particularly in the case of the Précis-writing Test, in which only 165 out of 1,334 examined, or about 12 per cent., were successful.

Special tests for officers of the Salt, Abkári and Separate Revenue Department.

162. For special tests for officers of the Salt, Abkári and Separate Revenue department 569 candidates in all presented themselves, of whom 423 were successful. The results were very good, more especially in the case of test A, Criminal Law, in which nearly 94 per cent. of the number examined passed.

Financial.

163. The receipts of the commission amounted to Rs. 1,42,196, exceeding the actuals for 1900-1901 by Rs. 5,757. The total expenditure, inclusive of refunds and of the charges paid for printing work done at private presses, amounted to Rs. 1,14,587, or Rs. 4,913 less than the charges of the previous year. The accounts for the year, therefore, showed a surplus of Rs. 27,609.

164. The number of boarders in the male branch of the Lawrence Asylum rose from 282 to 293; there were 52 admissions and 41 boys left; seven of the latter enlisted, five entered the Telegraph department of Government, two entered the Cable Telegraph Company and one went to the Medical College at Calcutta. The year was comparatively healthy; 284 in-patients and 620 out-patients were treated in the hospital, but there were no deaths. The receipts during 1901 were Rs. 1,12,050, of which Rs. 37,090 were donations and interest on Government securities, Rs. 31,680 were the grant from Government and Rs. 24,000 were a donation from the Lawrence Asylum Press. The expenditure amounted to Rs. 1,09,457 and the closing balance on the 31st December 1901 was Rs. 18,802. **The Lawrence Asylum. (1901.) Male Branch.**

165. The number of boarders in the female branch on January 1st 1901, was 65, of whom 48 were Europeans and 17 Eurasians; there were nine admissions and six departures; at the close of the year 61 girls were awaiting admission. There were only five admissions into hospital during the year. The result of the inspection of the school by the Inspectress of girls' schools was satisfactory. The receipts during the year were Rs. 19,086, of which Rs. 16,320 constituted the grant from Government; the expenditure amounted to Rs. 20,210 and at the close of the year the debit-balance had increased from Rs. 1,625 to Rs. 2,749. **Female Branch.**

166. The total cash receipts on account of the Lawrence Asylum Press at Madras rose from Rs. 1,45,158 to Rs. 1,88,340 and the disbursements from Rs. 1,63,774 to Rs. 1,78,020, exclusive of Rs. 10,000 transferred to fixed deposits; the balance on 31st December 1901 was Rs. 4,906; a grant of Rs. 20,500 was made to the Lawrence Asylum. The receipts and expenditure of the Ootacamund Branch were Rs. 16,662 and Rs. 19,129 including Rs. 3,000 transferred to capital account and the balance on the 31st December 1901 was Rs. 2,766; Rs. 3,500 were contributed by the branch to the Lawrence Asylum. **Press.**

167. The teaching staff of the Reformatory School was strengthened by the appointment of a fourth master, a Hindustani teacher and an assistant to teach miniumalu-work in the blacksmith's department. Two ex-pupils obtained appointments on the staff. The strength of the school rose from 159 at the beginning of the year to 163 at its close; during the year 28 pupils were admitted, but 38 youthful offenders in jails were refused admission owing to want of accommodation. With one exception all the pupils admitted had committed crimes against property; the remaining pupil had murdered a little girl of 2½ years of age for the sake of ornaments worth Rs. 2-4-0. The ages of 76 per cent. of the pupils at the close of the year were 13 years or less; 124 or 76 per cent. of the boys will be detained for not less than five years. Every district except Anantapur was represented among the pupils. Of the total number of pupils 65 per cent. were caste-Hindus; the number of Panchamas rose from 20 to 24; the number of pupils belonging to the criminal classes declined from eleven to eight; it has been found that time and money spent on such pupils produces little or no good. The conduct of the boys, viewed as a whole, showed marked improvement as the total number of punishments fell from 202 to 164; the number of boys not punished at all rose from 89 to 96 and the number of those punished only once rose from 31 to 38, 84 per cent. of the boys having therefore behaved well. The new system of awarding marks had the general effect of raising the earnings; the total earnings during the year and the average annual earning of each pupil increased from Rs. 497-3-6 and Rs. 3-4-0 to Rs. 559-4-5 and Rs. 3-8-8 respectively. Twenty-five pupils, the highest number on record, went up for the primary examination and all passed. Instruction in drawing was given to 107 boys; instruction in other technical subjects was also imparted. In the Madras Exhibition of Fine and Industrial Arts held in February 1901 the school was awarded a bronze medal for the excellence of the textile fabrics which it exhibited. Thirty pupils went up for technical examinations in various subjects and twenty of them passed. During the year 24 pupils were discharged, while 30 were discharged in 1900. Of the discharged pupils 19 obtained employment and one emigrated. The receipts rose from Rs. 2,856 to Rs. 2,907 and the expenditure fell from Rs. 22,255 to Rs. 21,730; the net expenditure during the year (Rs. 18,823) was therefore Rs. 577 less than in 1900. **The Reformatory School. (1901.)**

LITERATURE AND THE PRESS.

The Educational Library and Museum.

168. The Educational Library and Museum are kept open for inspection in the office of the Director of Public Instruction during working hours. In addition to the book cases provided by the different publishing firms for the exhibition of their books, the firm of E. Arnold, London, furnished last year a book case for their publications.

Connemara Public Library. (1901-1902.)

169. The total number of readers in the Connemara Public Library during the year rose from 13,284 to 13,819 and the number of volumes given out to readers increased from 14,547 to 17,382. The number of standard works added to the library was 314, of which 284 were acquired by purchase and 30 were presented. The preparation of a new edition of the library catalogue (1894) was taken in hand, and the manuscript slips were finished as far as letter R at the close of the year.

The Government Oriental Manuscripts Library. (1901-1902.)

170. The work of travelling for the acquisition of manuscripts for the Government Oriental Manuscripts Library, which had been suspended in 1899, was resumed during the year. The number of manuscripts acquired rose from 105 in the year 1901–1902 to 112, of which 37 were presented, 50 were acquired by purchase and 25 by transcription or restoration. Nearly two-thirds of the manuscripts acquired related to religion. The number of visitors rose from 1,641 to 1,930, the majority of whom (1,125) were copyists; 1,921 manuscripts were consulted and 1,133 of these were copied; the manuscripts most largely consulted were those classified under "Poetry." The preparation of the descriptive catalogue of Sanskrit manuscripts was completed during the year; 805 new slips relating to manuscripts discovered in the course of revision were also prepared. The amount spent on the collection, transcription and preservation of manuscripts and on other contingent charges was Rs. 545.

Libraries, Museums and exhibitions.

171. All colleges, both arts and professional, are provided with suitable libraries. Of 538 secondary schools for boys and 197 for girls, 478 and 175, respectively, have libraries, but only 305 out of 19,093 primary schools for boys and 164 out of 782 for girls are provided with them. Libraries also exist in 51 out of 77 training schools and in 29 out of 59 other special schools. On the whole there is provision for general reading in 1,247 institutions out of 20,792. The number of institutions possessing libraries rose during the year from 1,212 to 1,248 and the number of volumes from 348,838 to 364,063. Most of the professional institutions in Madras and some of the training and industrial schools in the mufassal are provided with museums. The museum started a few years ago in the Teachers' College is reported to be of very great help to the students, and additions are frequently made to it by old students of the college. The Art Loan collection, which now consists of nearly 90 pictures, was fairly well used during the year by the schools in the Presidency town, especially by those for girls.

Educational associations and reading-rooms.

172. Reading-rooms exist in most colleges and in many secondary schools and receive aid from public funds towards the purchase of non-Indian periodicals. The number of teachers' associations rose during the quinquennium from 168 to 180 and the number of members from 1,815 to 4,696. Registered reading-rooms and literary associations fell in number from 18 to 17, but the number of members rose from 3,167 to 6,282, while unregistered reading-rooms and literary societies, which are attached to schools and colleges, rose from 186 to 244 and their strength from 46,132 to 49,633.

Periodicals.

173. The principal newspapers published in English in the year 1901 were the *Madras Mail*, the *Madras Times*, the *Madras Standard* and the *Hindu*; the circulations of these papers were 4,083, about 3,000, about 2,000 and 1,010 respectively. Twelve English papers were started during the year, but an equal number of such papers were discontinued. The number of Anglo-Vernacular and Vernacular newspapers and other periodicals at the close of the year was 122. Fifty-five of these dealt with general and political subjects, 40 with religious subjects and 27 with education and literature. Thirty-nine periodicals were published in Tamil, 31 in Telugu, 22 in Malayalam and 11 in Canarese. The periodicals which had the largest circulations were the *Messenger of Truth*, a Telugu monthly religious

paper with a circulation of 4,700, the *Vrittanta Patrika*, a Canarese weekly paper with a circulation of 4,400, the *Satya Dutan* or the *Messenger of Truth*, a Tamil monthly religious paper with a circulation of 3,700, and the *Children's Magazine*, a Tamil monthly religious paper with a circulation of 3,500. In addition to these, seven Tamil, six Malayalam, four Canarese, two English-Tamil and one Telugu periodicals had circulations of 1,000 or more. The number of periodicals which were published for the first time during the year was 38 and the number of those which ceased to exist was 27; in the previous year 12 newspapers were started and 17 ceased to exist.

Registration of Books.

174. The total number of publications registered during 1901–1902 was 1,254, this being the highest figure during the past decade; the corresponding figure for the preceding year was 1,144. Of those registered during 1901–1902, 925 were books and pamphlets and 329 periodicals, while 360 were published in English, 648 in the Vernaculars, 68 in the Indian classical languages and 178 were written in more than one language. Of the whole number published, 349 were educational in their aim. Classifying the registered works for 1901–1902 according to subject-matter, the majority, as usual, dealt with religion—the number of such works being 411—while 194 were works on language, 56 on law, 18 on medicine and 61 on science; 83 dealt with biography, fiction and history, 73 with poetry and 27 with the drama, and 313 were works of a miscellaneous character. The number of works of which copyright was registered in the year was 354.

The "Mappilla Friend."

175. The "Mappilla Friend," an illustrated quarterly magazine in Malayalam, was brought out in 1901 with a view to provide healthy literature for the reading portion of the Mappilla community in Malabar. The publication of this magazine was undertaken by the School Book and Literature Society, Government paying half the cost. Five hundred copies of the magazine are printed and distributed *gratis* through the inspecting agency to Mappilla schools.

LITERARY SOCIETIES.

Introduction.

176. Excluding sectarian institutions and associations, such as missionary, theosophical, Brahmo Samaj and similar societies, which are mainly intended to advance the interests of particular religionists or of particular classes of individuals, 460 scientific and literary societies or reading-rooms were borne on the returns of the Educational department for 1901–1902. The total number of members or visitors connected with these societies included 31,852 adult males, 3,515 adult females and 25,164 juveniles. The gross income during year amounted to Rs. 74,834, of which Rs. 853 were met from public funds, Rs. 4,300 from endowments, and Rs. 69,681 from donations and subscriptions.

Government Oriental Manuscripts Library.

177. Three collections of manuscripts, viz., (1) the vernacular manuscripts and the local tracts and copies of inscriptions belonging to the Mackenzie collection, (2) the East India House collection, and (3) Brown's manuscripts, which were all in an out-house attached to the Old College, Nungambakam, under the care of the Director of Public Instruction, formed the nucleus of what is now the Government Oriental Manuscripts Library. They were transferred in 1869 to the charge of Mr. Pickford, then Professor of Sanskrit in the Presidency College, who was directed to look after the manuscripts and to prepare a catalogue of them to facilitate their identification and their accessibility to the public. The Professor of Sanskrit thus became the Librarian of this institution and had the assistance of a clerk and two peons to carry on the work connected therewith. In 1875, he became the Curator of the Library and was given an allowance of Rs. 100 per mensem. He was then called upon to prepare for publication important literary and historical manuscripts; and in 1876, in accordance with the order of the Government of India of the year 1868, he was required to discover new manuscripts in the Presidency and to purchase them or acquire them by transcription. In pursuance of these orders many manuscripts have been acquired and the total collection is now classified as follows:—

	No. of works.		No. of works.
Sanskrit	11,022	Arabic	164
Telugu	2,900	Persian	610
Tamil	1,255	Hindustani	58
Canarese	1,069	Miscellaneous (Javanese, Singhalese etc.) ...	198
Malayalam	95	Local tracts	3,829
Marathi	368		
Uriya	43	Total ...	21,611

The following publications have also been issued in execution of these orders:—

(1) List of manuscripts in the private libraries of Southern India, volumes I and II with an index, containing the names of about 19,000 manuscripts.
(2) Index of the 62 volumes of local records.
(3) Śukranītisāra.
(4) Report on the search for Sanskrit and Tamil manuscripts for the years 1896–97 and 1893–94.

178. Tours in search of manuscripts were also made between the years 1883 and 1886, and 51,000 manuscripts belonging to private libraries were catalogued. In the year 1886, the duty of searching for manuscripts, which carried an annual grant of Rs. 3,200, was transferred to the Government Epigraphist, and an annual grant of Rs. 600 was sanctioned to the library for acquiring and transcribing manuscripts and for preserving them. A descriptive catalogue of the Sanskrit manuscripts has been prepared and is now in the press; the first instalment of 104 pages has been published. A similar catalogue of the vernacular manuscripts has been ordered to be prepared. Between the years 1880 and 1902, 4,700 manuscripts were acquired. The number of visitors, who come to consult the library, has risen from 333 in 1879 to 1,930 in the year 1901. Arrangements are made to supply copies of manuscripts to scholars at their own expense. The manuscripts are systematically dusted and oiled.

179. The library was removed from the Old College to the Presidency College in 1870, thence to the Secretariat buildings in the fort in 1890 and lastly in 1896

to the museum buildings where it is now located. The Curator's monthly allowance of Rs. 100 was stopped after the retirement of Dr. Oppert in 1893; and the staff of the library now consists of the Curator, the vernacular munshi and two pandits.

Government Central Museum.

180. The policy governing the management of the Government Central Museum during recent years has been to render it a popular index or illustrated guide to the natural history (animal, vegetable, and mineral), arts, archæology, ethnology, and economic resources of Southern India. That it is popular with sight-seers is shown by the fact that it is visited annually by more than 400,000 people. The institution is divided into two buildings, old and new, of which the latter, with the connected Connemara Public Library, was opened to the public in 1896.

181. The old building is devoted to the natural-historical, archæological, and economic sections. Very much appreciated is a small vivarium, wherein are exhibited a series of snakes, smaller mammals, and birds, with photographs, pictures, and specimens illustrating their life history. The most conspicuous exhibits in the animal section are the skeleton of the great Indian whale-bone whale, which was washed ashore near Mangalore, and measures 48 feet in length, and the skeleton of a solitary male elephant, which was shot in South Arcot, and stands about 10′ 6″ at the shoulder. In the archæological gallery are set up the beautiful sculptured marbles from the railing of the Buddhist Stupa at Amarávati in the Kistna district, which dates back to the latter end of the second century A.D. and a valuable relic is a fragment of bone contained within a rock-crystal casket from Bhattiprolu in the Kistna district, which was enclosed in an outer stone casket inscribed with a legend stating that it was made in order to deposit therein some relics of Buddha. The relic probably dates back to 200 B.C. or earlier.

182. In addition to several galleries devoted to the illustration of the fine and industrial arts and ethnology of Southern India, the new buildings contain the fine historic collection of arms and armour which was formerly deposited in the arsenal of Fort St. George, and the splendid series of arms from the old Tanjore palace armoury. A room is set apart as an anthropological research laboratory; and a further room contains the valuable collection of pre-historic antiquities, which includes the Breek's collection of pottery from the cairn and barrows of the Nilgiri hills. The large numismatic collection is specially rich in coins of the various native dynasties of Southern India, and of the various European companies, English, Dutch, French, Portuguese and Danish.

Connemara Public Library.

183. The Connemara Public Library contains more than 10,000 standard works, in addition to a large series of Government publications, journals of societies, calendars of state papers, etc., and is resorted to by about 14,000 readers annually. Like the museum, the library is open to the public daily, except on Fridays. On the first Saturday of each month the museum is closed to males, and set apart for gosha female visitors, of whom about 4,000 come annually. Connected with the new building is a theatre capable of holding more than 400 people, with a stage adapted for the purposes of lectures, conferences, and entertainments by amateurs in aid of charities, etc. The cost of the upkeep of the museum and library in 1901–1902 was Rs. 37,888.

The Madras School Book and Literature Society.

184. The most enlightened development of vernacular publication is shown in the work of the society first known as the Madras School Book Society, then as the Madras School Book and Vernacular Literature Society, and now styled the Madras School Book and Literature Society. It was organized in the year 1820 about two years previous to the earliest measures of the Madras Government in the Department of Public Instruction initiated by Sir Thomas Munro. Its first object was the provision of suitable school-books of instruction for use in native schools and seminaries, both English and vernacular, and with this object it began the purchase, preparation and publication of useful works to be supplied to them either gratuitously or at a cheap rate. In this work it continued for some time until 1865 when its work was taken up by other and more recent agencies, especially the Government Department of Public Instruction and the Christian Vernacular Education Society. It then directed its efforts principally to the creation and diffusion of a sound and instructive vernacular literature. The results of the latter are various publications in Tamil, Telugu, Hindustani, Malayalam and Canarese. The Tamil and Telugu '*Janavinodini*,' a monthly magazine of instruction and amusement, continued to

be published till the year 1890. A Telugu dictionary, undertaken on a large scale, has been completed. '*The Mappilla Friend*,' a quarterly journal in Malayalam, is now published by the society. From the commencement the depository of this society was in the Old College, Nungambakam, Madras, but its books are now sold by the S.P.C.K. at the Vepery Depot. At first the society was maintained by subscriptions and donations, mostly from Europeans employed in the service of Government. At a later stage it received an annual grant from Government which was discontinued from 1880. For several years past it has been self-supporting. On the abolition of the Government Central Book Depot, it undertook the custody and sale of Government school-books. This agreement terminated on the 31st March 1889. The society was registered under Act XXI of 1860 on 15th August 1393. In 1901, rules were laid down for assisting authors in the publication of "really useful" vernacular literature "of a healthy moral tone." The estimated income of the society available for this purpose is about Rs. 1,200 a year.

Literary Societies.

185. Twenty-three other institutions have, up to date, been registered under the Indian Companies Act of 1860, the most important of them being (1) the Madras Literary Society and Auxiliary of the Royal Asiatic Society, (2) the Madras Progressive Union, (3) the Muhammadan Public Library and (4) The Madras Teachers' Guild, all located in the City of Madras.

The Madras Literary Society.

186. This society was founded in 1819 for the establishment of a public library and the encouragement of literature. In 1829, it became an auxiliary branch of the Royal Asiatic Society for the encouragement of science, and in pursuance thereof formed a museum which was in 1846 presented to Government to form the nucleus of the present Madras Central Museum. The society owns a very extensive and valuable library containing over 48,000 volumes, and occasionally publishes a journal or a literary magazine. At the close of the year 1901 the number of members was 113 and of subscribers 84; 454 books were added during the year, 242 of them being works of fiction and 212 general works. The list of works presented during the year comprises 214 books from Government, foreign and other institutions.

The Madras Progressive Union.

187. The Madras Progressive Union was established in April 1880. It conducts weekly debates on useful and important subjects. The union, which consists of 16 members, has a library and also maintains poor schools.

The Muhammadan Public Library.

188. The Madras Muhammadan Public Library was established in 1850 with liberal assistance from the Local Government, the late Nawáb of the Carnatic and the Muhammadan community generally. There is a large collection of books of the Hindustáni, Persian, Arabic and Turkish languages, besides a number of English books. The library receives from Government Rs. 35 a month, and has besides an income of Rs. 28 a month from landed property. The Patron is the Prince of Arcot. The number of visitors during 1901–1902 was 3,698 and the total expenditure during the year amounted to Rs. 978.

The Madras Teachers' Guild.

189. The Madras Teachers' Guild, which has for its object the improvement of the methods of teaching, the discussion of all questions affecting education and the profession generally and the promotion of social intercourse between teachers, was started in 1895. It consists of 265 members, including a president, five vice-presidents, two honorary secretaries and a treasurer. It has a library and reading-room and aid from Provincial funds is given towards the cost of books and non-Indian periodicals. The expenditure during 1901–1902 amounted to Rs. 770.

Other Societies.

190. There are 19 other registered literary societies and 410 unregistered societies. The oldest of the former is the Nilgiri Library, Ootacamund, which was founded in 1859, and in the year 1901–1902 had 251 members and expended Rs. 7,580. The only other society which spent more than Rs. 1,000 during the year 1901–1902 was the Vanniakula Kshatriya Mahasangam, Madras, the object of which is the education of children of the Vannia caste; the number of members was 360, and its expenditure amounted to Rs. 3,775. In many mufassal stations, where there are a few officials and pleaders, "reading-rooms" have been established with the object of maintaining libraries, procuring copies of periodicals and holding discussions; lawn-tennis courts are frequently attached to the reading-rooms which partake rather of the nature of clubs than of literary societies.

ARTS AND SCIENCES.

The Government Museum. (1901-1902.)

191. The total number of visitors to the Government museum old building was 410,436, and to the new building 398,822. The largest number of visitors on a single day was 94,239 to the old, and 86,752 to the new building at the feast of Pongal (January 15th). The number of gosha women who visited the museum on the monthly Saturdays set apart for them, was 3,979.

Visitors. Publications.

192. The following publications were issued during the year:—two Bulletins, one on the Nayars of Malabar, and the other on the Dravidian head, Yānādis of Nellore, earth-eating, the couvade, steel-yards, etc. A monograph on the ivory-carving of South India was published during the year.

Ethnography.

193. Mr. Thurston was formally appointed Superintendent of Ethnography for the Madras Presidency, to carry out the terms of the resolution of the Government of India by collecting physical measurements of selected castes and tribes by anthropometry, and information as to the manners and customs of the people of South India. Two long tours were made in the course of the year: one was to the Bellary district, and the other to Cochin, Travancore, and Tinnevelly. Certain conspicuous variations from the Tamil and Malayalam types of head becoming manifest at Hospet and Sandur, an adjournment was made to the town of Adóni in order that they might be studied more in detail among the various weaving castes, Desasta Bráhmans, Komatis, Bédars, Mádigas and Málas. At Kottayam a detailed investigation of the Syrian Christians, both northerners and southerners, was undertaken. During a march through the hills from Trivandrum to Courtallam measurements were taken of the Pulayans, Kánikars, and Mala Vēdars, of whom the last, like the Kādirs, have tooth chipping as a tribal custom. At Nazareth and Sawyerpuram in the Tinnevelly district a large number of measurements of the Shānars were made. A brief visit was paid to Chingleput, where the Irulas, Pallis and Agamudaiyans were investigated. The Irulas are interesting from their probable connection with the tribe of the same name which dwells on the slopes of the Nilgiri hills.

Anthropological section.

194. Among the additions to the anthropological section may be noted two large screens containing photo enlargements (glass transparencies) of various types of South Indian humanity, and primitive methods of making fire; ear ornaments of small rudraksha (Elœocarpus) nuts, silver lingam boxes, and pink silk cloths in which the lingam is carried, as worn by Lingayats of the richer and poorer classes, a series of photographs showing the various positions in which the lingam (the emblem of Siva) is worn, *i.e.*, on the upper arm, neck, chest, and forehead; implements used in tattooing by "puppet-show women" at Hospet; bamboo forked walking machine used by the Gadaba women of Vizagapatam to teach backward babies to walk by hanging on to a cross bar with their hands, while their feet are on the ground; carved wooden images (phallic) of the human figure and monkeys, (one bright green with a red face, and eating a green plantain), to ward off the evil eye from newly-built houses in Malabar; silver votive emblems representing various parts of the human body, etc., presented as thank-offerings for recovery from sickness, the winning of a law-suit or other auspicious events at Hindu temples in the Tanjore and Malabar districts; flint and steel for making fire, used by Travancore hill tribes and the Irulas of Chingleput; apparatus for making fire by friction by the vertical method, and bows and arrows used by Kānikars, who in making fire, sometimes use as an impromptu fire-stick the blunt end of an arrow; a primitive form of horologe, used by native physicians and others in Malabar, and consisting of a half cocoanut shell with a pin-hole pierced through its centre, (the shell is floated on water, which, entering through the pin-hole, gradually fills the shell, the time being indicated by the sinking of the shell in the water); and steel-yards or weighing beams (thookookol) used in the Madras and Malabar bazaars and by native physicians and druggists.

Art and Archæology.

195. A series of paintings by native artists, purchased at the Fine Art Society's Exhibition, or presented to the society, were exhibited as a loan collection. The series, which will be brought together as the result of the annual exhibitions, will be interesting hereafter as showing the early stages in the development of a native school of painting according to western canons. To the armoury were

added a series of East India Company muskets (A.D. 1789 to 1809) bearing the crest of the Company, and a wall-piece, more than 11 feet long, from the Bellary Arsenal, and stone cannon balls from Chingleput. A small collection of neolithic celts, which are considered very valuable as medicine and are sold for two to three rupees each, was received from Upper Burma, and a larger series of quartzite palæolithic implements from the Badvél taluk of the Cuddapah district. As an appendix to the exhibited series of pre-historic pottery, a collection of pottery utensils of native manufacture used at the present day was made during the Superintendent's tours; they show marked variations according to locality in structure, shape, ornamental design, etc. The series, which is capable of great expansion, so far includes specimens from Travancore, and from Malabar, Tinnevelly and Bellary districts.

Numismatics.

196. To the Travancore Durbar the museum was indebted for specimens of the new silver and copper coinage of the Travancore State, and also for a complete series of gold and silver pattern pieces from dies preserved at the Trivandrum mint. An aureus of Augustus, found in South India and of the following type, was acquired by purchase:

Obv. Augustus. Divi. F. Head r. bare
Rev. Butting bull r. Imp X.

197. Some interesting additions to the large existing collection of Indo-Portuguese coins were also obtained by purchase in England. From the Kistna district a series of lead coins of the Andhra dynasty with figures of a horse and sacred tree on a Buddhist railing, found in a pot during the excavation of a channel at Kanchakacherla, was acquired under the Treasure Trove Act. In like manner a find of copper coins of Aurangzib (Hyderabad mint) and rupees of the Emperors Muhammad Sháh, Ahmad Sháh and 'Alamgir, many of which were minted at Imtiyazgarh (Adóni), was obtained from the Pattikonda taluk of the Kurnool district. A miscellaneous collection of copper coins from Trichinopoly included the coin, bearing as emblems a cross and a crude representation of a *fleur-de-lis*, which, it has been suggested, was struck in honour of the French in the time of Dupleix by some native prince or by the French during one of their short-lived tenures of the Madura country. The collection of coins of the Nawábs of the Carnatic was catalogued and added to the coin cabinets.

Botanical and Economic.

198. A collection of marine algæ from Tuticorin, which had been sent to the British museum for identification, was returned together with a provisional list thereof. A number of herbarium sheets of specimens collected when on tour in Travancore were set apart for reference by students. A complete list of the economic products, indigenous or very largely used in South India, was drawn up as a basis for the thorough rearrangement and improvement of the economic section, which is confessedly far from up-to-date. In this connection a large number of specimens, herbarium sheets, photographs, etc., were brought together, and the Board of Revenue arranged with the Forest department for the collection of such timber specimens and forest products as are required to fill existing gaps.

Mineralogy.

199. Among the additions to the mineral gallery may be noted a series of specimens of magnesite from the "chalk hills," Salém district, and of cement made therefrom; polished blocks of red granite used for building purposes, from the neighbourhood of Ádóni, Bellary district; a series of specimens of red corundum and red corundum in calcite from the Salem district; gibbsite, containing 62·8 per cent. of alumina, which was found in a layer one foot thick immediately below the grass mould at Kodaikánal; graphite (plumbago) from the Shegundapalli estate, Gódávari district; specimens of a fossil, which was sold in the Bombay bazaar, and was recommended together with soapstone (steatite) by a native physician as a cure for dysentery, were sent for identification; they proved to be spines of the echinoderm *ciddaris*, which occurs in the Jurassic formation of Kutch.

Natural History.

200. A leopard cat (*Felis bengalensis*), which died at the People's Park, was added to the collection. A very fine pair of horns of the spotted deer (*Cervus axis*) and horns of the Indian gazelle or chinkára (*Gazella bennetti*) were presented to the museum. A series illustrating the skeletal structure of the various orders of South Indian birds was exhibited, and the large collection of game birds (ducks, etc.) of Madras and its vicinity, which has been brought together during the last few years, constitutes a valuable addition to the exhibited collection. A limited fund was placed

at the disposal of Mr. K. Ramunni Menon, lecturer on zoology at the Presidency College, for the purpose of marine dredging off the littoral of Madras; the results already obtained render it eminently desirable that dredging operations should be systematically continued over a long space of time with a view to both the publication of a detailed account of the local marine fauna and the collection of an exhaustive series illustrative thereof for the use of the college students and for exhibition at the museum. The small collection of live animals continued to be, as usual, a source of immense attraction. Among the additions during the year may be noted a large rock-snake (*Python Molurus*), which laid eight eggs soon after her capture; a frog (*Rana hexadactyla*) with a third median hind limb; scorpions from the city of Madras; and a melanotic variety of the common palm squirrel (*Sciurus palmatus*) from Pulicat. Two cobras (*Naia tripudians*) were exhibited together in one cage; in the course of feeding, each seized hold of a single rat, with the result that the larger cobra swallowed the smaller one together with the rat.

Meteorology. (1901-1902.)

201. There were four second-class and fourteen third-class observatories under the administration of the Meteorological Reporter to the Government of Madras. The site of the observatory at Mangalore, which was inspected by the head clerk of the Bombay Meteorological office, was condemned as unsatisfactory and its removal to another site was under consideration. The observatory which was sanctioned for Ootacamund was established in June 1901. The construction of the branch observatory at Dodabetta and of the staging over the terrace for fixing the anemograph there were completed in February 1902. With the object of increasing the utility and accuracy of the daily weather-reports, the Meteorological Reporter to the Government of Madras proposed in May 1901 to include in them daily weather-telegrams from seven additional observatories, viz., Tavoy in Burma, Hanamacondah and Raichur in Hyderabad, Sholapur and Ratnagiri in the Bombay Presidency, and Ootacamund and Kodaikánal in the Madras Presidency. This was sanctioned by the Government of India and the observations were included in the reports from September 1901.

Observatories.

202. Very few instruments were supplied during the year. A complete set of instruments was supplied to the Ootacamund Observatory, most of them being sent from Calcutta and the rest from Madras. An anemometer and a half-inch rain-measuring glass for a 5-inch rain-gauge were supplied to the Director of Kodaikánal and Madras Observatories. A barometer was supplied to the Director of Meteorology in Mysore.

Instruments.

203. Owing to the illness of the observer at Wellington, the observations there were suspended during the last few days of the year. Observations were commenced at Ootacamund in June 1901. With these exceptions observations were recorded regularly at all the observatories throughout the year. The 6 A.M. observations were telegraphed daily to the Simla, Bengal, Bombay and Madras Meteorological offices for information and inclusion in the daily weather reports and charts. Nine of the Madras Presidency meteorological observers were granted awards for contributing storm reports or special observations during the year.

Observations.

204. The daily weather-report was issued to 40 Government officials in Madras and to 57 in the mufassal and to certain subscribers. There were 10 subscribers on the 1st April 1901 and 9 on the 31st March 1902. The subscriptions collected during the year amounted to Rs. 136-8-0. The total cost of the Meteorological department was Rs. 10,793.

Reports.

205. On the 31st March 1901, there were 423 rain-recording stations (excluding the meteorological observatories), from which rainfall returns were sent for publication in the *Fort St. George Gazette*. To these 8 were added during the year and one was closed. The registration of rainfall at Ootacamund by the Revenue department was discontinued on the establishment of the meteorological observatory there. The returns for Kodaikánal and Periyakulam are also obtained from the observatories there now. The return for Madras is furnished by the Madras Observatory. On the 31st March 1902, there were 366 rain-recording stations under the Board of Revenue; of these 324 or 89 per cent. were inspected during the year; the remaining 61 stations, from which returns were sent, were in native States.

Rain-recording stations.

Astronomy. [*Report on the Kodaikánal and Madras Observatories for the period 1st April to 31st Dec. 1901.*]

Kodaikánal Observatory.

206. The buildings for the observatory at Kodaikánal were still under construction during the year; the work on the main buildings was practically completed with the exception of the supply of water to the dark room. The transit-room was nearly completed by the close of the year and the anemometer tower was half built. Progress was made with the buildings for magnetic observations. A programme of observations submitted to the Government of India was not approved by the Observatories Committee of the Royal Society who laid down the following plan of work dealing with solar physics and meteorological and other observations:—

(1) That the most widened lines in the sun-spots should be visually observed daily, six of such lines being observed between F and b and six between b and D.
(2) That other widened lines should be noted.
(3) That visual observations should be made of the prominences and chromosphere.
(4) That photographs should be taken by the Hale-Deslanders method.

After the above requirements are fulfilled, it is desirable that, if possible,

(5) Photographs should be taken of the spectra of sun-spots, for which, it is to be noted, comparison-spectra, other than the solar spectrum, are unnecessary.
(6) Meteorological observations as at present.
(7) Actinometry.
(8) Earthquake records.
(9) Cloud-photography.

The observations under the heads 7, 8 and 9 should only be undertaken if the resources of the observatory admit of the complete fulfilment of the earlier part of the programme.

207. From March 14th, when regular observations were begun, to December 31st, the sun's surface was examined on 248 days, and on 62 days spots were recorded; drawings were made on 48 days and 21 photographs were taken. During the total eclipse of May 18th observations were made of the times of contact, some photographs were taken and observations were made with the solar calorimeter; clouds, however, rendered the last of these valueless. The great comet (1901) was first seen on the evening of May 8th; it was then a very brilliant object, though close to the horizon; some photographs were taken but the results were not very satisfactory. Observations with the Balfour Stewart actinometer were made on 29 days, on only two of which complete sets (*i.e.*, at 10h, 12h., 14h.) were obtained. Observations with the solar calorimeter were made on four days and extended over 12 hours. The Milne horizontal pendulum for recording earth-quake-shocks is placed in the room below the south dome; the boom is placed north and south and the pier is built on the solid rock; the instrument was in good working order throughout the year and numerous shocks were recorded. Much time had to be devoted to the adjustment of instruments, the supervision of workmen and the training of assistants.

Madras Observatory.

208. The observations at the Madras Observatory were confined to the determination of time. During the year 222 transits of clock stars and 57 transits for azimuth were observed, and 59 separate determinations of level and collimation errors were made. The time signal gun at Fort St. George failed on 19 occasions out of 550, the percentage of success being 96·5. The time-ball at the Port office failed at 1 P.M. on three days, but on two occasions it was dropped at 2 P.M. The 4 P.M. time signal was received at the Central Telegraph office on every day except on December 29th, when there was an interruption on the line.

The School of Arts. (1901-1902.)

209. The number of pupils attending the School of Arts fell from 491 on the 31st March 1901 to 321 on the 31st March 1902. This result was mainly due to the enhancement of the fees according to the new scale which came into force on the 1st January 1902, and to the fact that all unpaid apprentices in the industrial department were required to pay fees for attending the drawing classes; the decrease indicates no real loss as it only shows that those pupils and apprentices who had no serious intentions of following a course of technical study were eliminated. This resulted in a rise in the average daily attendance from 63 per cent. of the numbers on the rolls to 78 per cent. Of the 321 pupils at the end of the year 286 belonged to Madras, 33 came from 13 other districts and the remaining

two from Mysore; 78 of them had passed a general educational test and 7 were undergraduates of the Madras University. Of the students 215 were the children of poor parents; the parents or guardians of 102 pupils were artisans, those of 87 were petty officials and those of 84 were other officials. Of the pupils 228 were non-Brahmin Hindus, 33 were Native Christians, 28 were Europeans or Eurasians, 19 were Brahmins, 10 were Muhammadans and 3 were Panchamas. The number of paid apprentices rose from 57 to 74 but the number of unpaid apprentices fell from 165 to 41; the diminution in the total number of apprentices was a great advantage and far more work was actually turned out than in the previous year and, since the instructors had more time to devote to each apprentice, the quality of the work improved materially. The percentage of artisans among the apprentices is steadily increasing and reached 59 in the year 1901-1902. For the several examinations in drawing, 395 candidates appeared and 185 of them passed; as the corresponding figures in the previous year were 453 and 279 respectively, the percentage of successful candidates fell from 61 to 47. Of 23 students who appeared for the examinations in industries 15 were successful, while in the preceding year 24 out of 33 candidates passed; the percentage of successful candidates fell therefore from 73 to 65. These unsatisfactory results indicate that the teaching side of the school was somewhat neglected for the industrial. Of 32 students who left the school during the year, 18 are reported to have found employment, their emoluments ranging from Rs. 6 to Rs. 40; nine of these secured employment as drawing-masters, draftsmen or tracers, but only 5 followed the trades taught in the school. On account of the introduction of the new scale of fees the monthly income from fees rose from Rs. 122 in March 1901 to Rs. 424 in March 1902. There was a marked rise in the sales in the wood-carving and carpentry department from Rs. 2,951 to Rs. 8,739. The sales in the carpet-weaving department fell slightly from Rs. 1,367 to Rs. 1,181. As the pottery department was abolished during the year, the sales were reduced from Rs. 8,733 to Rs. 2,465. The sales in the jewellery department advanced from Rs. 35 to Rs. 536. The sales in the metal-work department, which was attached to the aluminium department, declined from Rs. 11,108 to Rs. 9,814. In the decorating and painting department the most important development was the introduction of fresco-painting. The modelling department was started at the beginning of the year. The expenditure on the weaving department, which was also started at the beginning of the year, was Rs. 2,281 and the receipts were only Rs. 177; a weaving assistant was appointed and the work was removed to a shed in the Mount Road. The sales in the aluminium department rose from Rs. 1,52,202 to Rs. 1,95,845, but the expenditure also advanced from Rs. 1,95,034 to Rs. 2,35,424; the amount of metal purchased (126,938 lbs.) was 52,583 lbs. more than in 1900-1901; there has been a gradual accumulation of stock and the sales to other manufacturers and to artisans in the bazaars have increased. The value of the military orders rose from Rs. 27,722 to Rs. 64,824; roughly one-third of the business in aluminium is military work, one-third is for European residents in the country and one-third is for the native market. Part of the metal-working machinery, indents for which were sent in November 1900, was received during the year, but no use could be made of it. Excluding the aluminium department, the total expenditure on the school rose from Rs. 50,591 to Rs. 52,960, but the net expenditure fell from Rs. 31,959 to Rs. 27,170; taking all the transactions of the year into account, the balance against the school was reduced from Rs. 45,766 to Rs. 27,866. The aluminium department also appears to have worked at a profit.

CHAPTER VIII.

ARCHÆOLOGY.

1. The important excavations in the Tinnevelly district were continued during the year; these were mentioned in last year's report. The Superintendent, Archæological Survey, visited the Mercara taluk of the province of Coorg and examined several temples and kollekals or tombstones erected in honour of warriors slain in battle or in the chase. Many of the temples are built of mud and thatched with straw, while others have walls constructed of bamboos or wood in the form of lattice-work; some have good specimens of carved wooden pillars. The similarity of these buildings to some in Malabar and the resemblance between the peoples of the two countries suggest an ancient connection. Jain temples are substantially built of stone. A male and a female figure representing husband and wife are usually sculptured on kollekals; they are interesting as showing the ancient forms of weapons and dress. Two kollekals were secured for the museum. Many kollekals and other prehistoric remains exist in the depths of the forests. The Superintendent's report includes some account of the customs and principal festivals of the Coorgs.

2. The topographical survey of Vijayanagar was continued and some archæological remains, which were apparently unknown hitherto, were brought to light. Lists of ancient mounds in the northern districts of the Presidency were prepared by Collectors. The survey of Malabar district was continued. The Superintendent visited Mamallapuram or the Seven Pagodas and has included in his report an interesting account of the legend or *Sthalapurana* relating to the place. He has also given an account of Iswara's son, Subramaniya, the God of War, in connection with a visit to Tiruchendúr in Tinnevelly district. The Superintendent visited the famous temple at Tirupati and ascertained some legends connected with its origin; it is a Vaishnavite shrine dedicated to Srinivasa Perumal.

3. The Hindu temple at Sompalli in Madanapalle taluk, Cuddapah district, was under repair; an estimate for the repair of the Gurramkonda mahal in Vayalpad taluk of the same district was prepared. Some repairs to the Hindu temple in the fort at Vellore, North Arcot district, were carried out. An estimate was sanctioned for constructing stone walls in place of dilapidated wooden railings at the hill temples, which are caves cut in the rock, at Narasamangalam or Narasapalaiyam.

4. The Epigraphist's report contains a list of 411 stone inscriptions which were copied during the year; work was done in Chingleput, North Arcot, Anantapur, Salem, Coimbatore, Gódávari, South Arcot and Tanjore districts, in the Mysore, Shimoga and Hassan districts of the Mysore State, in the Pudukóttai State and in French territory near Pondicherry and Karikal. As the Epigraphist reported that many shrines with all their inscriptions have been destroyed in the execution of repairs to temples, Collectors have been asked to report to him every case in which an ancient temple is about to be rebuilt.

5. The amount spent on archæological survey was Rs. 13,995; but this amount does not include the cost of repairs to buildings of historical or architectural interest, and the cost of the Epigraphist and his establishment. The expenditure from the Imperial grant on account of the *Epigraphia Indica*, of which Volume VI, Parts VI and VII, and Volume VII, Parts I and II, were published, was Rs. 1,338.

CHAPTER IX.

MISCELLANEOUS.

ECCLESIASTICAL JURISDICTION.

General.

1. The Government maintain an ecclesiastical establishment. At the head of the Church of England portion of the establishment is the Lord Bishop of Madras; at the head of the Church of Scotland portion, the Presidency Senior Chaplain. The Ecclesiastical establishment consists (*a*) of a Bishop, an Archdeacon (who must be a Chaplain resident in India and is appointed by the Bishop), 36 Chaplains (including the Archdeacon and one appointment recently added to the establishment to provide for Berar), and a Registrar, and (*b*) of 4 Chaplains of the Church of Scotland. The services of this establishment are extended to non-official Europeans and others resident within the Presidency. The salaries and allowances of the Bishop and Archdeacon may be fixed and altered by the Secretary of State in Council, provided that no additional charge is imposed on the revenues of India. Two Chaplains of the Church of Scotland must be on the establishment; with the sanction of the Secretary of State, the Governor-General in Council may grant to any other sect, persuasion or community of Christians such sums of money as may be expedient for the purpose of instruction or for the maintenance of places of worship. The Government have communications with the Bishop in Travancore and Cochin and make a grant for a clergyman at Trivandrum who is in charge of Quilon. The Government also pay an allowance to the Roman Catholic Archbishop in Madras and pay or subsidize Roman Catholic priests and Wesleyan ministers to minister to the troops in military stations; they subsidize also missionaries and other clergymen ministering to Europeans in stations not served by Chaplains. The Government build, furnish, and repair churches for the use of soldiers, both Protestant and Roman Catholic, or pay for their sittings and make grants for non-military churches. The total expenditure during the financial year 1901–1902 amounted to nearly three and a half lakhs of rupees, the whole of which was debited to Imperial funds. Marriages between Christians may be solemnized not only by persons who have received episcopal ordination and by clergymen of the Church of Scotland but also by ministers of religion licensed for the purpose, by Marriage Registrars and by persons licensed to grant certificates of marriage between native Christians; these licenses are issued and appointments as Registrars are made by the Local Government so far as regards the territories under their administration and by the Governor General in Council so far as regards any native State. Marriages between persons of whom one only is a native Christian cannot be solemnized by persons licensed under the Indian Christian Marriage Act, 1872. Quarterly returns of baptisms, marriages and burials are sent by the clergy through the Registrar of the Diocese to Government. Quarterly returns of baptisms and burials are collected from dissenting ministers also and returns of marriages from those who are legally authorized to solemnize them.

43 Vic., c. 3.

3 and 4 Will. 4, c. 85, s. 102.

Act XV of 1872.

Act III of 1872.

The Church of England.

2. The diocese of Madras is coterminous with the Madras Presidency, but the Bishop also exercises jurisdiction over the native States of Hyderabad (including Berar) and Mysore and the British province of Coorg. The limits of the diocese may be altered from time to time by His Majesty by letters patent. The Bishop is subject to the metropolitical jurisdiction of the Bishop of Calcutta. He is

The Bishop.

3 & 4 Will. 4, c. 85, s. 93.

" *s. 94.*

" *s. 96.*

34 & 35 Vic., c. 62 Royal Warrants, 4th Nov. 1884, 28th July 1888, and 11th Feb. 1901. 15 & 16 Vic., c. 52. 16 & 17 Vic., c. 49. 37 & 38 Vic., c. 77.

appointed by the Crown and is entitled to a pension after holding his office for fifteen years. The Crown is empowered to grant the Bishop within the limits of his diocese the exercise of episcopal functions and of ecclesiastical jurisdiction for the superintendence and good government of the ministers of the Church of England therein. The Bishop exercises jurisdiction over the clergy holding his license, who are stationed within the native States of Hyderabad and Mysore and the British province of Coorg with the approval of the Governments of India and Madras, since the latter Government appoints Chaplains from the Madras Ecclesiastical Establishment to serve within those territories; and in virtue of general episcopal powers conferred upon him by his consecration. Rules may be made by the Crown regarding the absence of the Bishop on furlough or medical certificate, provided that no additional expenditure is incurred; leave may be granted to the Bishop by the Governor in Council in accordance with these rules. The Bishop may perform episcopal functions under commission from a Bishop in England. The Bishop superintends the spiritual work of the diocese; holds confirmations; ordains, licenses, and exercises jurisdiction over the clergy; visits all the stations at which clergy are located and many of the outstations as a rule once in three years; inspects their work in hospitals and schools; inspects the registers and other church books; recommends to Government the appointments and transfers of Chaplains; reports on proposals for new churches, for improvements in churches, or for changes suggested in any ecclesiastical arrangements; and consecrates new churches and cemeteries. The Archdeacon attends more particularly to the details of church establishments, church furniture, cemeteries, repairs, and budgets and communicates with Government on these subjects. Persons may be admitted into the orders of deacon or priest to officiate in India by the Archbishop of Canterbury or by the Archbishop of York or by the Bishop of London or by any Bishop specially authorized for the purpose. The Chaplains are divided into three classes consisting of senior Chaplains, junior Chaplains, and probationers respectively. The period of probation is three years. Time spent in India on service under the Diocesan Additional Clergy Fund or on other service approved by the Bishop and the Government of India may be included in the period of probation. A clergyman must have been three years in priest's orders before his nomination as a probationer; he must therefore have completed the thirtieth year of his age before his appointment by the Crown as a junior Chaplain. Promotion from the junior class to the senior is attained on the completion of 10 years' service in the junior class. The term of service for a full pension is 20 years from the date of becoming a junior Chaplain; seventeen of these years must have been spent in actual service. Smaller pensions or gratuities are granted on retirement on account of sickness before a full pension has been earned. Retirement is compulsory on the completion of 25 years' service, but exceptions are occasionally made to this rule under special circumstances. One of the Chaplains is appointed by the Bishop to be his Domestic Chaplain. The others are appointed by Government to the charge of stations, 29 in number (including Berar); the five ecclesiastical parishes in Madras and three in Bangalore are treated as separate stations. Every Chaplain at a station in which there are European troops visits the military schools and hospitals under stated rules. Outstations are attached to several stations; they are visited periodically by the Chaplain of the station.

The Archdeacon.

59 Geo. 3, c. 60.

Chaplains.

Other clergymen.

3. Besides the Chaplains there are other European and Eurasian clergymen, acting under the license of the Bishop; some of these are in receipt of allowances from Government. The latter, a few of whom are missionaries, minister to European congregations which are not entitled to the services of a resident Chaplain in the service of Government. The missionaries, as such, are not connected with Government. Of the clergy who are neither Chaplains nor missionaries some receive salaries from one or other of the two societies for providing additional clergy, or from local or other private contributions, or from both. Native clergymen, Tamil, Telugu and Mahratta, constitute a continually growing class. In the superintendence of missions and in the pastoral government of the native congregations the Bishop was largely relieved by the consecration on the 28th of October 1896 of a Bishop who exercises his episcopal functions by commission in the districts of Tinnevelly and Madura. The affairs of the native congregations, in matters not spiritual, are managed by councils composed chiefly of native clergymen and laity, and by the committees of the missionary societies.

Buildings.

4. The cathedral of the Madras diocese is the Church of St. George in Madras, which is vested under a Trust created by the East India Company on the 9th of February 1821 in a body of Trustees who are appointed by the Government of Madras. Two Chaplains are assigned to it. The Bishop lately appointed an honorary chapter of six canons attached to the cathedral. These honorary canons are chosen by the Bishop from among the clergy of the diocese and their titles are recognized by Government as a matter of courtesy. At every station where there is church property belonging to Government two lay communicants, one of whom should be a gazetted officer, civil or military, in the service of Government, are, on the recommendation of the Chaplain and the nomination of the Bishop, appointed by Government to be Lay Trustees; these form, with the Chaplain as president, a church committee. The duties of Lay Trustees are in many respects similar to those of church-wardens in England. The churches for European congregations are, with rare exceptions, the property of Government and consecrated.

Establishment.

5. On the 1st of April 1902 there were 252 clergymen officiating under the license of the Bishop of Madras. Of these 44 were officers of the ecclesiastical establishment, that is to say, 34 Chaplains and 10 clergymen receiving allowances from Government. In addition to these there were in the diocese 42 English missionaries, 159 native clergymen and 7 retired clergymen. According to the census of 1901 the number of European and Eurasian members of the Church of England within the diocese of Madras was 19,639 and the number of native members was 120,283.

Travancore and Cochin.

6. The ecclesiastical supervision of the Church of England in Travancore and Cochin, exercised with the tacit consent of the native rulers by the Bishop of Calcutta until 1835 and later by the Bishop of Madras, was transferred in 1880 to a special Bishop who is called the Bishop of the Church of England in Travancore and Cochin and was consecrated in accordance with a royal license issued under the Jerusalem Bishopric Act (5 Vic., c, 6). The number of native Christians then transferred from the superintendence of the Bishop of Madras was 16,000 baptized and 2,100 under instruction. The number of baptized persons in the diocese is now 38,186 and of persons under instruction 6,018; there are 12 European and 28 native clergy in the diocese.

The Church of Scotland.

7. The Presidency Senior Chaplain of the Church of Scotland is the channel of communication between Government and the Scotch Chaplains. The rules regarding service, furlough and pension of Chaplains of the Church of Scotland are the same as those prescribed for Chaplains of the Church of England.

The Church of Rome.

8. The Roman Catholic establishments of Southern India are to be classed as missionary in the sense that they are not State establishments. Until 1886 there were no Roman Catholic Bishops' sees in the Presidency, but Vicariates Apostolic were created by the Pope, and the Archbishop of Goa was given extraordinary jurisdiction beyond Portuguese territory. The Vicariates were presided over by titular Bishops. In 1886 the establishment of the hierarchy in India was proclaimed by His Holiness Pope Leo XIII in his Apostolic letter 'Humanæ Salutis Auctor,' dated 1st September. By this bull the pre-existing Apostolic Vicariates were constituted episcopal churches and from among the new dioceses Verapoli, Madras and Pondicherry were elevated to the honour of archi-episcopal dignity, and have for their suffragans—Verapoli, the Bishop of Quilon and the Vicars Apostolic of Trichur, Changanacherry and Ernakulam; Madras, the Bishops of Nagpur, Vizagapatam and Hyderabad; Pondicherry, the Bishops of Mysore, Coimbatore and Kumbakonam. The Roman Catholic Archbishop of Madras receives an allowance of Rs. 500 per mensem from the Madras Government for furnishing ecclesiastical returns. The Roman Catholic Church is not dealt with in any legal enactments in this country except incidentally.

ECCLESIASTICAL. (1901.)

The Church of England.

9. On the 31st of March 1902, of the 252 clerks in holy orders officiating under the license of the Bishop of Madras, 44 were officers of the Ecclesiastical establishment, that is to say, 34 chaplains and ten clergymen receiving allowances from Government in the civil department. In addition to all these there were in the diocese 42 English missionaries, 159 native clergymen and seven retired native clergymen. One European and four natives were ordained deacons and two native deacons were ordained priests during the year. Eight clergymen received licenses to officiate in the diocese whether as chaplains, missionaries or native pastors. The Church of Saint Peter the Apostle at Negapatam was consecrated on the 16th of March 1902. On the 15th of January 1902, the Lord Bishop of Madras held his Primary visitation of the clergy of the diocese in the Cathedral Church of Saint George in Madras; seventy-eight clergymen appeared under citation (the attendance of the rest of the clergy of the diocese being for various reasons excused) and to these the Lord Bishop delivered his Primary charge.

Honorary Chapter.

10. Having obtained from His Excellency the Governor in Council an assurance that Government would be willing to recognize the honorary title of Canon as a matter of courtesy if conferred by the Bishop on six clergymen of the diocese, whose names on appointment should be submitted to Government for their information, the Lord Bishop of Madras executed on the 17th of January 1902 a deed poll, or instrument constituting an honorary chapter of six canons to be attached to the Cathedral Church of Saint George in Madras.

Voluntary contributions.

11. Alms and other devotions of the people offered through clergymen ministering to English congregations in the diocese during the year under report amounted to Rs. 1,51,675. In addition to this, further sums of Rs. 16,022 for the erection of Church of England Soldiers' Institutes at Secunderabad and Rs. 5,231 for the Diocesan House of Mercy were collected during the year.

The Church of Scotland.

12. The establishment of the Church of Scotland paid by Government included the Senior Chaplain at Madras and a Chaplain at Bangalore. The total cost of this branch of the Ecclesiastical establishment rose from Rs. 22,217 in 1900-1901 to Rs. 22,723, the increase occurring in salaries and allowances.

STATIONERY. (1901-1902.)

General Transactions.

13. At the beginning of the year the value of stores was Rs. 3,01,258, the value of English goods being Rs. 2,54,090 and that of Indian goods being Rs. 47,168. The value of English stores received during the year was Rs. 5,41,517, including Rs. 4,53,009, the value of goods received from England; Indian stores received during the year were valued at Rs. 77,462. English stores to the value of Rs. 4,89,460 and Indian stores to the value of Rs. 1,05,799 were issued or written off the accounts during the year, and the values of English and Indian stores at the close of the year were Rs. 3,06,147 and Rs. 18,831 respectively. The value of Indian goods substituted for English goods was Rs. 32,251, and the saving effected was Rs. 7,912; in the previous year the value of goods substituted was Rs. 1,22,675 and the substitution resulted on the whole in a loss of Rs. 3,048. The fall in the value of articles of Indian manufacture purchased during the year was due to the fact that all descriptions of paper were obtained through the Director General of Stores instead of from the paper-mills at Calcutta.

Issues.

14. The value of stationery issued to Imperial departments was Rs. 13,943, of which Rs. 8,840 represent the value of stationery issued to the Post office department. The stationery issued to Provincial departments was worth Rs. 5,01,154, of which Rs. 1,76,482, Rs. 58,620, Rs. 43,637, Rs. 38,193 and Rs. 35,463 were the values of stationery debited to the Land Revenue, to Registration, to Salt, to Civil works and to Law and Justice (Judicial) respectively. There was an increase

in the issues debited to Salt on account of the amalgamation of the Customs department with the Salt, Abkári and Separate Revenue department and the introduction of new forms and the disposal-number system in subordinate offices. An increase in the value of stationery debited to Civil works is ascribed to the entertainment of temporary establishments in connection with projects relating to irrigation, etc. The stationery issued to the Land Revenue department was less than in the previous year, as a large quantity of printing paper was not supplied owing to its late arrival from England; as the Government Press had not taken delivery of its annual supply before the close of the official year, the value of stationery debited to Stationery and Printing declined. A fall in the value of stationery issued to the Medical department is ascribed to the transfer of four dispensaries in the Gódávari district to the district board. The value of stationery debited to local funds was Rs. 33,832. The total value of stationery issued (Rs. 5,95,259) was Rs. 59,109 less than in the previous year.

THE GOVERNMENT PRESS. (1901–1902.)

Financial.

15. During the year the total receipts were Rs. 65,884, while they were Rs. 61,859 in the previous year: the rise in the cash realizations from Rs. 32,096 in 1900–1901 to Rs. 33,190 was due to the increase in the subscriptions to the Indian Law Reports and in the sale of Acts and publications. The amount paid into the district treasuries and adjusted rose from Rs. 30,117 to Rs. 33,208. The disbursements were Rs. 2,85,195, while in 1900–1901 they were Rs. 2,74,983, but the debit against the press was reduced to Rs. 2,75,140 by deducting the cost of printing and binding work done for the Postal, Telegraph and Census departments. There was an increase of expenditure of Rs. 1,665 under printing, Rs. 3,532 under binding, Rs. 606 under type-foundry, and Rs. 1,695 under despatching of publications, etc., in the Government Press. There was a decrease of Rs. 437 under printing and increase of Rs. 2,136 under binding in the Penitentiary branch. During the year the amount paid for pensions was Rs. 24,120.

Sale of publications by agents.

16. There were eight agents for the sale of Madras publications, but only four agents received and sold them; the sales effected amounted to Rs. 948 and the commission earned to Rs. 316. The sale of similar publications at the Government Press amounted to Rs. 2,375. Messrs. Higginbotham & Co. have a stock of publications unsold, which is valued at Rs. 843; the other agents indent for publications as required. The value of Acts and publications in stock on the 1st April 1901 was Rs. 1,09,804; the additions received during the year were Rs. 18,067, and the issues were Rs. 15,888; the balance on the 31st March 1902 was worth Rs. 1,11,983. In 1901 5,900 copies of each monthly part of the Madras Series, Indian Law Reports, were printed; of these copies, 2,159 were issued to officials and 2,328 to subscribers; the receipts rose from Rs. 15,383 to Rs. 15,822 and the charges from Rs. 8,901 to Rs. 9,306. Of subscribers to the *Fort St. George Gazette*, 192 received the complete gazette and 129 received parts only; the receipts on account of the *Gazette* were Rs. 6,084; the charges fell from Rs. 29,677 to Rs. 29,396.

Plant and stores.

17. The value of plant at the end of the year was Rs. 4,80,248. The principal additions in the printing department were brass rules, chases, cases, galleys, etc., and one wharfedale double-crown printing machine; in the binding department one nipping press, one iron standing press, one stabbing machine, one pen-making machine and glazed boards; in the type-foundry one stereotyper's hot press, one height-gauge and one line-gauge. The cost of plant received from England was Rs. 5,815 or Rs. 2,216 less than 1900–1901. The value of stores in hand on the 1st April 1901 was Rs. 54,416, the receipts during the year were Rs. 56,267, and the issues were Rs. 81,888, the balance at the end of the year being valued at Rs. 28,794, which was much smaller than usual owing to the non-receipt of the supplies for 1902–1903 from the Stationery office.

Printing.

18. Among books and works completed during the year were :—A Preliminary List of Grasses indigenous to Southern India; Notes on Wax and Colour Drawing

at Madura, etc.; Museum Bulletins, volume iii, No. 3, The Nayars of Malabar; volume iv, No. 2, Anthropology, The Dravidian head, etc.; Catalogue of Prehistoric Antiquities; Monograph on the Ivory-carving Industry of Southern India; Memoir on the Ganjám Maliahs; a Descriptive Catalogue of Sanskrit Manuscripts, volume i, part I; Preliminary List of Vernacular Names of Trees, Shrubs and Woody Climbers found in the Forests of the Madras Presidency; and the Census Village Statistics of eleven districts. Work was undertaken for 376 offices and departments. The chief works in progress at the end of the year were the four volumes of the Census Report and Evidence taken before the Irrigation Commission.

Cost. 19. The total cost for printing rose from Rs. 2,65,882 to Rs. 2,67,110. The principal increases were Rs. 1,708 under Inspector General of Registration, Rs. 1,672 under Board of Revenue (Separate Revenue), Rs. 3,904 under Chief Secretariat, Rs. 1,765 under Plague, Rs. 1,611 under Educational and Legislative departments, Rs. 3,535 under Revenue Secretariat. The work done for the Irrigation Commission amounted to Rs. 1,610. During the year 93,677 solid pages, 18,540 half tabular and 15,873 full tabular pages were set up, and 17,392 pages remade up; of the solid pages 40,490 were proceedings of Government, and of these 5,128 were pages of notes to proceedings. Reduced to an equivalent of pica solid foolscap folio, the total production was 214,695 pages with 61,751,431 impressions, indicating, when compared with the previous year, decreases of 5,333 pages and of 334,744 impressions at the Government Press, and a decrease of 585 pages and an increase of 499,762 impressions at the Penitentiary branch. At the Government Press there was a rise of four pies in the cost of a page (Re. 0–15–0) and of Re. 0–1–4 in the cost of a 1,000 impressions (Rs. 1–5–0), but at the Penitentiary branch, while there was an equal increase in the cost of a page (Re. 0–14–11), the cost of a 1,000 impressions (Re. 0–11–3) fell by two pies.

Binding. 20. The charges for binding in leather, cloth and paper, and for ruling, numbering, etc., were Rs. 45,294, while they were Rs. 39,625 in the previous year. There was a considerable rise in nearly every description of work received, and the work in this department increases year by year. During the year 2,815,000 quinine-envelopes, the largest number on record, were made. The number of ordinary envelopes made amounted to 1,614,192, of which 189,849 were square, 1,388,339 long and 36,004 broad.

Type Foundry. 21. During the year 2 moulds, 419 punches and 383 matrices were made, and 21 matrices were renewed. There were 52,532 lbs. of English and vernacular types, 18,057 lbs. of leads, quotations and clumps, and 3,829 lbs. of stereoplates cast, making a total of 74,418 lbs. but the total in 1900–1901 was only 71,216 lbs. The expenditure rose from Rs. 23,069 in the previous year to Rs. 23,675. The metal used for casting cost 2 annas 7 pies per lb., being $1\frac{1}{2}$ pies less than in the preceding year; the average cost of types, etc., cast was 4 annas $4\frac{1}{2}$ pies and was $4\frac{3}{4}$ pies less than last year. The cost of production of a pound of each size of type varied from 3 annas for great primer to 6 annas 6 pies for brevier, 2 annas 9 pies to 5 annas 6 pies for quadrats, and 3 annas for leads, quotations and clumps.

Miscellaneous. 22. Excluding convicts in the Penitentiary branch, 1,018 persons were employed at the beginning of the year and 1,049 at its close. The average monthly earnings of compositors at the Government Press fell from Rs. 14–14–5 in 1900–1901 to Rs. 14–9–9. At the Penitentiary branch there were 17 prisoner-compositors employed throughout the year and their average monthly earnings were Rs. 7–7–11, while in 1900–1901 the average monthly earnings were Rs. 8–4–2. The class for teaching prisoners undergoing long sentences to read English and the technical classes were maintained throughout the year at the Penitentiary branch; 73 pupils from the several classes appeared for the Government Technical examinations and 25 passed.

DISTRICT PRESSES. (1901-1902.)

23. The estimated value of work done in district-presses fell from Rs. 95,030 in 1900–1901 to Rs. 89,968, but the receipts rose from Rs. 14,325 to Rs. 17,017 and the charges from Rs. 60,505 to Rs. 66,208. The principal variations in the estimated values of work done at the various presses were declines from Rs. 16,213 to Rs. 4,801 in Tanjore and from Rs. 3,009 to Rs. 649 in the Nilgiris and advances from Rs. 5,213 to Rs. 9,896 in Malabar, from Rs. 1,264 to Rs. 3,400 in Chingleput and from Rs. 3,392 to Rs. 5,102 in Kistna. The receipts in Ganjám, Gódávari, Kistna and Tinnevelly rose from Rs. 449, Rs. 1,196, Rs. 633 and Rs. 958 to Rs. 848, Rs. 1703, Rs. 1,086 and Rs. 1,367 respectively, and they fell from Rs. 2,212 to Rs. 1,722 in Madura. The most marked variations in the charges were increases from Rs. 3,690 to Rs. 7,662 in Malabar, from Rs. 3,068 to Rs. 4,776 in Bellary and from Rs. 2,869 to Rs. 3,495 in Gódávari and a fall from Rs. 3,029 to Rs. 2,429 in Chingleput. The charges on account of each press were less than the estimated value of the work done except in Gódávari, Bellary and the Nilgiris; the charges in the press in the Nilgiris were Rs. 2,379, while the work done was valued at only Rs. 649. No explanations have been offered by the Board of Revenue in their report for these variations.

THE CHEMICAL EXAMINER'S DEPARTMENT. (1901.)

[*Judicial and Administrative Statistics of British India, VIII—Medico-Legal Investigations, page 105.*]

General.

24. As usual, there has been a further increase in the demands made on the resources of the Chemical Examiner's department both in the general miscellaneous and in the medico-legal sections of work, especially so under the former heading, the total number of examinations performed having risen from 2,112 in the previous year to 2,517. In all directions the work of the Chemical Examiner has increased greatly.

Medico-Legal Investigations.

Suspected human poisoning.

25. The percentage of cases of suspected human poisoning which were detected during the year 1901 was greatly in excess of the percentage in any previous year. The highest percentage of detections recorded occurred in 1897, when it was 75·42; during the year 1901 it was 77·31; whereas the percentage of detections 15 years ago was 56·9, it is now 35 per cent. higher. The average number of human cases examined in the past 15 years was 120 and the average number of articles examined was 685; the numbers of human cases and of articles examined in the year 1901 were 119 and 740 respectively, so that while the actual numbers of these cases and of articles examined have not varied very much, the results of improvements in the methods and in the general quality of the work, which have been gradually introduced from time to time, may justly claim a share of credit for the satisfactory results which have appeared in the progressive percentage of detections.

Undetected cases.

26. There were in all 27 cases in which no poison was detected. In 8 cases 5 persons were affected without a fatal termination. In 19 cases 64 persons were affected, of whom 19 died; in 15 of these cases the balance of evidence was in favour of death from causes other than poisoning; in 2 cases the evidence was insufficient to trace the cause of death to disease or to poison, and in 2 cases the balance of evidence pointed to death having been caused by poison; in both of these cases the death was most probably due to ptomaine-poisoning.

Detected cases.

27. There were 92 cases in which poison was detected. They concerned 157 individuals, of whom 60 died. In 59 cases, in which 112 individuals were affected, of whom 37 died, the poison was inorganic; and in the remaining 33 cases affecting 45 persons, of whom 23 died, the nature of the poison detected was organic. Of the 59 cases in which inorganic poisons were used, various compounds

of arsenic were detected in 38, various mercurial compounds in 13, mixed arsenical and mercurial compounds in 4, and in the remaining 4 cases these poisons were associated with carbolic acid, aconite and ganja. Of the 33 cases in which organic poisons were detected, single poisons were detected in 30 cases and multiple poisons in 3 cases. Aconite poison was used alone in 10 cases. Strychnine was detected in 2 cases by itself and in 2 others it was associated with opium and with aconite respectively. Atropine and dhatura were detected in 6 cases, 11 persons being affected with 3 deaths. Opium, ganja, the juice of *calotropis gigantea*, oleander and plumbagin were the organic poisons detected in other cases during the year. Snake-venom was detected amongst the drugs used by a quack, who was accused of causing death by unskilful treatment. A hospital-dispenser died from a dose of carbolic acid; poisoning from carbolic acid is extremely rare in this country.

Animal-poisoning.

28. There were 117 cases of animal-poisoning referred for examination, in which 85 animals perished, involving the examination of 402 articles; in 1900 the corresponding figures were 129, 88 and 417, respectively. The percentage of detections rose from 81·4 in 1900 to 84·6. Compounds of arsenic were, as usual, the most frequently detected poisons employed in the destruction of cattle. The juice of the *calotropis gigantea* was detected in a larger number of cases in 1901 than in 1900. This juice is smeared on a rag which is introduced into the lower bowel, and the animal generally dies within 24 hours. Aconite, strychnine, *plumbago zeylanica* and mercurial compounds were also detected as the instruments of poisoning in some of these cases.

Stains.

29. The number of cases in which stains were examined (70) and the number of articles examined (275) in 1901 were in excess of those of the previous year, the percentage of detections being 81·4 and 72·5 respectively. Of 4 of the cases which referred to the crime of rape, mammalian blood was detected in 2, mammalian blood and semen in 1, and semen alone in the other. Of 64 cases referred for blood stains only, in cases other than rape, there were 51 in which blood was detected, and in 32 of these the blood was proved to be mammalian; of the 64 cases 57 related to the crime of murder.

Miscellaneous.

30. Eight miscellaneous cases included incendiarism, throwing vitriol on a woman's face, possession of illicit salt and of articles intended for adulterating opium, counterfeiting coin, and the examination of inks and disputed handwritings.

General analyses.

31. No less than 377 samples of fireworks from the various districts in this Presidency were examined. There was an increase in the number of examinations for the Customs department (227) under explosives, petroleum, paints, and in almost every branch of the work; the total increase over the number of such examinations in the previous year amounted to nearly 50 per cent. Work was also performed for the military, jail and other departments of Government and for municipalities, the total number of examinations made on their behalf or on behalf of private parties being 393.

CHARITABLE INSTITUTIONS.

Monegar Choultry, etc. (1901.)

32. The Monegar choultry, the Native infirmary, the Foundling asylum, Raja Sir Ramaswamy Mudaliyar lying-in hospital and the Raja of Venkatagiri's choultry were managed by the Directors of the Monegar choultry. The receipts from all sources, excluding those of the Raja of Venkatagiri's choultry, amounted to Rs. 20,836, made up of Rs. 10,637 contributed from Government, Rs. 6,899 realized from invested funds and Rs. 3,300 from private subscriptions, donations and miscellaneous sources. The expenditure during the year amounted to Rs. 21,946, of which Rs. 5,601 were spent on the depot choultry, Rs. 99 on the Foundling asylum, Rs. 11,222 on the Native infirmary, Rs. 4,298 on Raja Sir Ramaswamy Mudaliyar lying-in-hospital and Rs. 725 on municipal assessment and petty repairs. Rs. 12,490 were expended on feeding charges, Rs. 5,349 on establishment and Rs. 2,496 on charges. The total expenditure was Rs. 987 less than in 1900. There was a decrease in the number of paupers in the depot choultry and an

increase in the number of patients in the Native infirmary, the average daily number being 85·46 for the former and 111·81 for the latter, while they were 85·71 and 97·2 respectively in the previous year. The average cost of feeding rose from 1 anna 6½ pies in 1900 to 1 anna 8 pies per head per diem in the depot choultry, and was 2 annas 11 pies in the Native infirmary as in 1900. The increase in the choultry is due to the high prices of food-grains. In the asylum for foundlings the daily average number of children relieved increased from 2·83 in 1900 to 4·58 and the average cost per head rose from 9½ pies to 11¼ pies. The total number of women admitted for accouchement in Raja Sir Ramaswamy Mudaliyar lying-in hospital was 989 or 352 less than in 1900. The cost of dieting rose from Rs. 1,423 to Rs. 1,507, and the average per head from Rs. 1–0–2 to Rs. 1–8–4; the increase was due to enhanced rates of dieting and "extras." The receipts of the Raja of Venkatagiri's choultry during the year amounted to Rs. 4,037 and the balance on hand was Rs. 2,062; the total sum to the credit of the charity was Rs. 6,100, of which Rs. 4,417 were spent in the relief of paupers and Rs. 136 on clothing. The average number of in-door paupers fed in the choultry was 42·30 and of out-door paupers receiving one-fourth measure of raw rice a day was 116·69; the corresponding figures for the previous year were 46·73 and 117·27. The cost of relieving each pauper was 1 anna 8 pies.

Triplicane Langerkhana. (1901–1902.)

33. The receipts and expenditure on account of the Triplicane Langerkhana during the year were Rs. 7,014 and Rs. 6,002. The balance in cash and rice was Rs. 1,012; if the Government grant due for the expenditure in March 1902 (Rs. 400), and other miscellaneous sums due were added, the amount to the credit of the Langerkhana would be Rs. 1,443. The numbers of paupers receiving cooked food daily, receiving raw rice once a month, receiving money doles paid once a month were, respectively, 121, 231 and 10 on 1st April 1901 and 112, 222 and 9 on 31st March 1902; the average daily numbers of such paupers were 118·03, 227·52 and 9·66 respectively. There were 5 inmates at the beginning of the year and 4 at the close, the average number of inmates being 4·58 daily; the inmates were fed twice a day. The cost of the aid to each pauper per mensem fell from Rs. 1–7–2 in 1900–1901 to Rs. 1–6–2.

Miscellaneous.

34. Excluding dispensaries, there were, during the year under report, 3,224 charitable institutions in the Presidency with an income of over 12 lakhs of rupees. Of these institutions 1,964 were maintained entirely by the munificence of the general public whose contributions in the shape of donations, subscriptions and endowments in land and money amounted to about 5½ lakhs of rupees, 306 institutions were supported entirely by Government at a cost of about 1½ lakhs of rupees, 314 others at a cost of over 2½ lakhs of rupees were kept up partly by Government and partly by the public, while the maintenance of the remaining 640 costing about 2½ lakhs of rupees devolved wholly or in part on the local boards. As regards the objects to which the funds of these institutions were devoted, there were 2,320 institutions intended for travellers, who were provided with accommodation and in most cases with food or raw rice and other necessary supplies. Of these, 1,001 choultries were intended exclusively for Hindus, 60 for Muhammadans, and six for Europeans, while the remaining 1,253 were not restricted to any class of the community. There were 327 institutions maintained with the object of giving relief to paupers; Hindus only were relieved in 233, Muhammadans only in 18, and Europeans and East Indians only in two, while the remaining 74 were open to all classes irrespective of caste and creed. There were 559 institutions for the exclusive feeding and accommodation of Brahmins and Bairagis. Further 14 institutions were maintained for orphans, two for lepers, one for Rajput boys and girls, and there was one institution in which food was served to persons afflicted with leprosy, loss of vision or defective hearing. The total number of persons aided during the year at all the charitable institutions was 13,653,680 and the average number that received relief daily was 45,317 or one per mille of the population of the Presidency.

MUHAMMADANS IN THE SERVICE OF GOVERNMENT.

35. The number of Muhammadans employed in the superior service of Government was 6,405; in these figures Muhammadans receiving less than Rs. 120 a year in the Public Works Department are excluded as such appointments are not in superior service; but the number of Muhammadans employed in other departments on Rs. 120 per annum or less is reported to be 4,808 or more than three-quarters of the total number of Muhammadans employed in those departments; of the total number of appointments on Rs. 120 per annum or less, 23·47 per cent. were held by Muhammadans, the percentage being higher than in 1900–1901. The percentage in all grades of appointments was higher than in the previous year. Muhammadans held 1,043 appointments, the pay of which lay between Rs. 120 and Rs. 250 per annum, or 9·63 per cent. of such appointments. As the percentage of Muhammadans to the total population of the Presidency at the census of 1901 was 6·42, Muhammadans held considerably more than their share of the lower appointments. On the other hand they did not hold a proportionate number of higher appointments, for they held only 268 (5·89 per cent.) appointments having an annual salary of Rs. 250 to Rs. 500, 123 (5·27 per cent.) having an annual salary of Rs. 500 to Rs. 1,000, 130 (5·94 per cent.) having an annual salary of Rs. 1,000 to Rs. 2,500, 13 (2·90 per cent.) having an annual salary of Rs. 2,500 to Rs. 5,000 and 5 (1·12 per cent.) having an annual salary of more than Rs. 5,000. One statutory civilian is Muhammadan. The number of Muhammadans increased from 5,161 to 5,318. The percentage of the appointments considered in this paragraph, which were held by Muhammadans, was 15·45.

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